Swami Keshvanand Institute of Technology,
Management & Gramothan

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Affiliated to Rajasthan Technical University, Kota

Brochures of Add-on/Certificate Programs (2016-17 to 2020-21)

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-3500300, 2752165, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

The Spoken Tutorial Project

- Self-explanatory: uses simple language
- Audio-video: uses multisensory approach
- Small duration: has better retention
- Learner-centered: learn at your own pace
- Learning by doing: learn and practise simultaneously
- Empowerment: learn a new **FLOSS** (**F**ree/**L**ibre and **O**pen **S**ource **S**oftware)

Target Audience

High school, College and Engineering students

Pre-requisites for Basic level tutorials:

- Basic knowledge of electronics
- Electronic components and connections
- Knowledge of C programming

Additional Pre-requisites for Intermediate level tutorial:

- Assembly language

Workshops

The Spoken Tutorial Project Team conducts workshops on Arduino and other FLOSS using spoken tutorials and gives certificates to those who pass an online test.
For more details, please visit https://spoken-tutorial.org

Forum

We have developed a beginner friendly Forum to answer specific questions pertaining to any part of a particular tutorial.
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Forum help available to all learners

Content available in 22 Indian languages

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Spoken Tutorial

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ARDUINO™

National Mission on Education through
Information and Communication Technology
(NMEICT)
www.sakshat.ac.in

Funded by MHRD, Government of India.

What is Arduino?

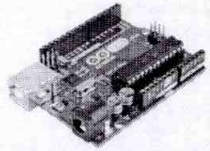
- Arduino is an open-source electronics platform used for building electronics projects.
- Arduino consists of both a physical programmable circuit board or microcontroller and a software IDE (Integrated Development Environment) that runs on the computer.
- It is used to write and upload computer code to the physical board.
- It is intended for making interactive projects.
- Download Arduino IDE from www.arduino.cc

Features of Arduino IDE

- Works on Linux, Windows and Mac operating systems
- Has many in-built functions that make programming simple and easy
- Easy to write code and upload it to the physical board
- Arduino IDE can be used with any Arduino board
- Can be easily adapted for IoT applications
- Arduino can be turned into IoT product by adding ESP8266 wifi module

Benefits of using Arduino Kit

- Arduino boards are less expensive compared to other microcontrollers platform.
- The Arduino programming environment is easy-to-use for beginners.
- For advanced users, the language can be expanded through C++ libraries and AVR-GCC programming language can be added to Arduino programs.
- The modules are published under a Creative Commons license, so circuit designers can make their own version of the module.
- Arduino platform was designed for hobbyists, students and professionals to create IoT applications that play in the human interface world using sensors, motors, etc.
- Arduino can interact with buttons, LEDs, LCDs, motors, speakers, cameras, TV and smartphones, etc.
- Arduino can be connected to one or more sensors to capture the data.



Spoken Tutorials in Arduino series

Basic Level

- Overview of Arduino
- Electronic components and connections
- Introduction to Arduino
- Arduino components and IDE
- First Arduino Program
- Arduino with Tricolor LED and Push button
- Arduino with LCD
- Display counter using Arduino
- Seven segment display
- Pulse Width Modulation
- Analog to Digital Conversion
- Wireless Connectivity to Arduino

Intermediate Level

- Assembly programming through Arduino
- Digital logic design with Arduino
- AVR-GCC programming through Arduino
- Interfacing LCD through AVR-GCC programming
- Mixing Assembly and C programming

Popular uses of Arduino

- Home automation (controlling lights, fans and other appliances) via Android smartphone
- Traffic light control
- PC controlled robotic arm
- Temperature controller
- Anti-theft camera system
- Automated irrigation system
- Feeder for Aquarium
- Garage parking
- Line follower robot

Components required to practise Arduino Spoken Tutorials

1. Arduino UNO or Compatible Board (1 no.)
2. USB Power Cable (1 no.)
3. Resistor 220 ohms (6 nos.)
4. Resistor 10K Ohms (2 nos.)
5. Resistor 1K Ohms (4 nos.)
6. Breadboard (1 no.)
7. Tricolor LED Common Cathode (1 no.)
8. Red LED Common Cathode (1 no.)
9. Seven segment display - Common cathode (1 no.)
10. Seven segment display - Common anode (1 no.)
11. Decoder – IC 7447 (1 no.)
12. LCD 16 X 2 soldered with pin header (1 no.)
13. Jumper wires Male to Male (20 nos.)
14. Jumper wires Male to Female (8 nos.)
15. Potentiometer 10K Ohms (1 no.)
16. ESP8266 es01 WiFi Black color Module (1 no.)
17. DHT11 Temp_Humidity Sensor Module (1 no.)
18. L293D H-Bridge Motor driver IC (1 no.)
19. Toy Motor (1 no.)
20. Buzzer (1 no.)
21. Push Button Switch (2 nos.)

Online web tutorials for Arduino
Contents

Basic Level

1. Overview of Arduino
   - Learning objectives of Arduino
   - Prerequisites for learning Basic level Arduino tutorials
   - Prerequisites for learning Intermediate level Arduino tutorials
   - Who can use Arduino?
   - Glimpse of Spoken Tutorials available on Arduino series
2. Electronic components and connections
   - Breadboard and its internal connections
   - LED and its connections
   - Tri-color LED
   - Resistor
   - Simple circuit using LED, resistor and breadboard
   - Common mistakes when using breadboard to make connections
   - Pushbutton and its connections
   - Common mistakes when using pushbutton to make connections
   - Seven segment display and its connections
   - Demonstration of all the above components
3. Introduction to Arduino
   - About Arduino device
   - Features of Arduino
   - Components of Arduino board
   - Description of Microcontrollers
   - Few examples where a Microcontroller is used
   - Installation of Arduino IDE on Ubuntu Linux OS
   - Run the arduino executable file
   - The Arduino IDE window
4. Arduino components and IDE
   - Set up a physical connection between Arduino and a computer
   - Connect the Arduino board to the computer using the USB cable
   - Various components available in Arduino hardware
     - ATMEGA 328 microcontroller chip
     - About Arduino BootLoader
     - Digital Pins
     - Analog Pins
     - Blinking LEDs that are helpful for troubleshooting
     - Ground Pins
     - External power adapter
   - Arduino programming language
5. First Arduino Program
   - Write an Arduino program to blink an LED
   - Arduino program is saved as Sketch
   - Default program environment with two empty functions -
     - setup - function for setting up a micro-controller

- loop - infinite loop
- Program to turn on the LED
- Compile the program into binary format
- Program to turn off the LED

6. Arduino with Tricolor LED and Push button
   - Tricolor LED - Common Cathode Tricolor LED
   - Other external devices that are required for this experiment
   - Understand the connection circuit details
   - Connect a tricolor LED to Arduino board
   - Write a program to blink tricolor LED
   - Use Pushbutton to control the blinking
   - How to reduce the delay of the blink
7. Arduino with LCD
   - Connect an LCD to Arduino board
   - See the details of the circuit connection
   - See how to do the soldering
   - Setup the components as per the circuit diagram
   - The aim is to write two strings on the LCD display
   - Write a program to display a text message on the LCD
8. Display counter using Arduino
   - Connect an LCD and a Push button to Arduino board.
   - Add a pushbutton and make a simple counter
   - Write a program in the Arduino IDE
   - See that pushbutton is working successfully
   - Modify the program to set a counter
   - Output: count is increased whenever the button is pressed
9. Seven Segment Display
   - Connect a seven segment display to Arduino board
   - Types of seven segment display
   - Connection details of common cathode seven segment display
   - Connection details of common anode seven segment display
   - Circuit connection explanation
   - Live setup of the connection
   - Program to blink LEDs in seven segment display
   - High and low state of LED's in the seven segment
   - Program to display digits 0 to 4 in seven segment display
   - Compile and upload the program
10. Pulse Width Modulation
    - About Pulse Width Modulation
    - About duty cycle and frequency
    - Formula to calculate the duty cycle
    - Experiment to control the brightness of LED by varying the duty cycle
    - Experiment to control the speed and direction of a DC motor
    - Circuit connection explanation of the above experiments
    - Source code for the above experiments
    - Demonstration of the output
11. Analog to Digital Conversion
    - About DHT11 sensor
    - Arduino resolution concepts
    - Circuit connection details of DHT11 sensor and Arduino
    - Features of DHT11
    - Download the DHT11 Arduino library to run this program.

- Code to detect the temperature and humidity using DHT11 sensor
- Display the output in the Serial Monitor screen
- Display the output in the Serial Plotter screen

12. Wireless Connectivity to Arduino
    - About ESP8266-01 WiFi module
    - Various pins of ESP8266-01 WiFi module
    - Circuit connection of ESP8266 - 01 module with Arduino
    - Setup the read-write permission to the USB port
    - Download and install ESP8266 WiFi module in Arduino IDE
    - Establish a connection between WiFi module and a laptop or a mobile phone
    - Source code for the above experiment
    - Demonstration of the output

Intermediate Level

1. Assembly of Robot
    - Components required to build a Robot
    - About soldering DC motors
    - Acrylic Robot Chassis with screws and nuts
    - Steps to mount the motor on the Chassis
    - Fixing the wheels of the Robot
    - Assembled Robot
    - About .apk file
    - About MIT App inventor to build an app
    - Code file for Car Bluetooth RC.apk
    - Steps to install the app on the Android phone
2. Robot Control using Bluetooth
    - Components required for Bluetooth communication
    - About Bluetooth communication
    - About Data Mode and AT Command Mode
    - Circuit connection details of Arduino board and HC-05 Bluetooth module
    - Actual setup of the connections
    - Program to control the movement of the Robot
    - Configure the Bluetooth in Android phone
    - Working of the Car Bluetooth RC App
    - Working of the Robot
    - Control the movement of the Robot using Bluetooth communication
3. Introduction to IoT
    - About IoT
    - IoT system components
    - About Thingspeak platform
    - Create an account in Thingspeak
    - Login to the account and create a new channel
    - Enter the channel information
    - Show the graph outline
    - Generate the API keys
    - Importance of Write API key and Read API key
    - Copy the Write API key
4. Sending data to the cloud using IoT devices
    - External components required for sending data to the cloud
    - About MQTT Protocol
    - Circuit connection of DHT11 and WiFi module with Arduino

- Setup the MB102 module on Breadboard
- Circuit connections required for the experiment
- Configure the ESP8266 module to communicate
- Download a DHT sensor library
- Program in Arduino IDE for interfacing WiFi module and DHT11 sensor
- Working of ThingSpeak channel
- Graph of temperature and humidity values from the DHT11 sensor in ThingSpeak platform
- Data Import/Export option to download the data as CSV file

Advance Level

1. Assembly programming through Arduino
   - Write an assembly program to display a digit on seven segment display
   - Arduino - Assembly code reference
   - Arduino ATmega328 Pin mapping
   - Connection circuit details
   - Installing AVRA and AVRDUDE assembler
   - How to connect and check the port number of Arduino
   - Assembly program to glow the dot LED on the seven segment display
   - Assembly program to display digit two on the seven segment display
   - Assembly program to display digit five on the seven segment display using decoder
   - How to save the file, assemble and upload to the Arduino
2. Digital Logic Design with Arduino
   - Write an assembly to verify the logical AND operation
   - Use the m328Pdef.inc file that is available in the code files link of this tutorial.
   - Explanation of the Source code for logical AND operation
   - Save the file and generate the.hex file
   - Upload the code to the Arduino
   - Displaying the output on the Seven segment display
   - Replace the program with or to perform logical OR operation
   - Replace the program with xor to perform logical XOR operation
   - Implement and verify the below combinational logics:
     - A = W′
     - B = WX′Z′ + W′X
     - C = WXY′ + X′Y + W′Y
     - D = WXY + W′Z
3. AVR-GCC programming through Arduino
   - Write an assembly program to display a digit on seven segment display
   - Arduino - Assembly code reference
   - Arduino ATmega328 Pin mapping
   - Connection circuit details
   - Installing AVRA and AVRDUDE assembler
   - How to connect and check the port number of Arduino
   - Assembly program to glow the dot LED on the seven segment display
   - Assembly program to display digit two on the seven segment display
   - Assembly program to display digit five on the seven segment display using decoder
   - How to save the file, assemble and upload to the Arduino
4. Interfacing LCD through AVR-GCC programming
   - Interface a LCD to Arduino board
   - Pin connections details of the Arduino and LCD
   - Image showing the connections
   - Live set up of the connections

- Write an AVR-GCC program to display a digit on LCD
- Using avr/io.h, util/delay.h, stdlib.h libraries in the program
- Using ClearBit() and SetBit() function
- Various functions used to excute the output
- Using make FNAME command to compile and upload to Arduino
- Displaying the output digit 5 on the LCD

5. Mixing Assembly and C programming
   - Combining Assembly and C programming
   - Explanation of the circuit connections
   - Live setup of the connection
   - Assembly routine program which initialises and sets pin 13 of Arduino as output
   - Call that Assembly routine in AVR-GCC program to blink the Dot LED of the Seven Segment display
   - Use the Makefile that is available in the code files link of this tutorial.
   - Explanation of the Source code of the subroutine and main program
   - Save the file and generate the .hex file
   - Upload the code to the Arduino
   - Display the output on the Seven segment display

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THE C PROGRAMMING LANGUAGE

C++

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About C

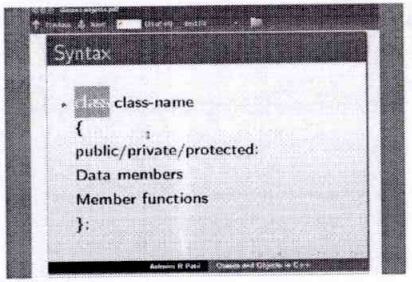
C is a general-purpose programming language, initially developed by Dennis Ritchie between 1969 and 1973 at Bell Labs. Its design provides constructs that map efficiently to typical machine instructions. C is one of the most widely used programming language and there are very few computer architectures for which a C compiler does not exist.

Features

- C has facilities for structured programming and allows lexical variable scope and recursion.
- All executable code is contained within subroutines, called "functions."
- C program source text is free-format, using the semicolon as a statement terminator and curly braces for grouping blocks of statements.
- Typing is static, but weakly enforced: all data has a type, but implicit conversions can be performed; for instance, characters can be used as integers.
- Complex functionality such as I/O, string manipulation, and mathematical functions are easy to implement with library routines.

About C++

- C++ is a statically typed, free-form, compiled, general-purpose programming language. It was developed by Bjarne Stroustrup starting in 1979, at Bell Labs.
- It adds object-oriented features such as classes, and other enhancements to the C programming language.
- The language began as enhancements to C, first adding classes, then virtual functions, operator overloading, multiple inheritances, templates, and exception handling among other features.
- C++ is also one of the most popular programming languages and can be implemented on most hardware and OS platforms.
- As an efficient compiler to native code, its application domains include:
- Systems software
- Application software
- Device drivers
- Embedded software
- High-performance server and client applications
- Entertainment software like video games



Features

- Classes: By using classes, we can create user-defined data types. A class is the collection of a set of data and code. An object is the instance of a class.
- Inheritance: Allows one data type to acquire properties of other data types. This provides the idea of reusability, that means we can add new features to an existing class without modifying it.
- Data Abstraction and Encapsulation: Encapsulation means hiding data from the data structures. Here, the data is accessible to only the functions that are allowed to access it. Abstraction means representing essential features without including background details.
- Polymorphism: means one interface can be used for multiple implementations, so that object can behave differently for each implementation.
- Dynamic Binding: At runtime, the code matching the object under the current reference will be called.

C and C++ Advantages

- Powerful and flexible: C/C++ are used for developing operating systems, compilers, parsers, interpreters, word processors, search engines and graphic programs.
- Support: C requires less runtime support
- Portable programming language: A variety of C/C++programm written for one computer system can be compiled and run on another system, with little or no change.
- Modular: Written in routines called functions and classes (C++), programs can be used in other applications or programs.
- Preferred by professional programmers: A variety of C/C++ resources and helpful supports are widely available.
- Standardised: Many standards have been documented, maintained and updated for C and C++ as standard references.

Online web tutorials for C and Cpp
Contents

Basic Level

1) **First C Program**

- -Header Files
  - example: #include <stdio.h>
- main()
- Curly braces { }
- printf()
- semicolon ;

- Compiling a C program
  - example: gcc filename.c -o output parameter
- Executing a C program
  - example: ./output parameter
- Errors

2) **First C++ Program**

- Header files
  - --example: #include <iostream>
- main()
- Curly braces { }
- -cout<<
- semicolon ;

- Compiling a C++ program
  - example: g++ filename.cpp -o output parameter
- Executing a C program
  - example: ./output parameter

3) **Tokens in C and C++**

- Data types, constants, identifiers
- Keywords
  - example: if, break, else
- Constants
- Data types
  - example: int, float, char, double
- Format specifiers
  - example: %d, %f, %c, %lf
- Range of data types
- Variables
- Identifier
- Errors

4) **Functions in C and C++**

- What is a function
- Syntax for declaration of a function
- Function with arguments
  - example: return-type function-name(parameter);
- Function without arguments
  - example: return-type function-name;
- Calling a function
- Errors

5) **Scope of Variables in C and C++**

- Introduction
- Syntax of declaring a variable
  - example: data-type var-name;
- Syntax for initializing a variable
  - example: data-type var-name = value;
- Scope of variables
- Global variable
- Local variable
- Error

6) **If And Else If statement in C and C++**

- What are Statements.
- Syntax for if and
- If-else Statement
- Errors

7) **Nested if and switch statement in C and C++**

- Nested if statement.
- Switch statement.
- Syntax for nested-if statement
- Syntax for switch statement
- break statement
- Comparison between nested if-else and switch statement
- Errors

8) **Increment and Decrement Operators in C and C++**

- Increment Operator
  - example: ++
- Postfix increment
  - example: a++
- Prefix increment
  - example: ++a
- Decrement Operator
  - example: --
- Postfix decrement
  - example: a--

- Prefix decrement
  - example: --a
- Typecasting
- Errors

9) **Arithmetic Operators in C and C++**

- Arithmetic Operators
- Addition Operator
  - example: a + b
- Subtraction Operator
  - example: a - b
- Multiplication Operator
  - example: a * b
- Division Operator
  - example: a \ b
- Modulus Operator
  - example: a % b
- Errors

10) **Relational Operators in C and C++**

- Double Equal to
  - example: a == b
- Not Equal to
  - example: a != b
- Greater Than
  - example: a > b
- Less Than
  - example: a < b
- Greater than Equal To
  - example: a >= b
- Less Than Equal To
  - example: a <= b
- Errors

11) **Logical Operators in C and C++**

- And &&
- Or ||
- Not !
- Errors

Intermediate level

12) **Loops in C and C++**

- Loops
- Syntax for while and do-while loop
- Comparison of while and do-while loop
- Syntax for
- for loop
- Errors

13) **Arrays in C and C++**

- What are arrays
- 1-D Arrays
- Syntax for Declaration of arrays
  - example: data type array_name [size];
- Syntax for Initialization of arrays
  - example: data type array_name [size]=value;
- Accepting values from the user
- Errors

14) **Working with 2-D Arrays in C and C++**

- What are 2-D Arrays.
- Range of arrays
- Syntax for Declaration of 2-D arrays
  - example: data type array_name[row][column];
- Syntax for initialization of 2-D arrays
  - example: data type array_name[row][column]=

{

{row-val},{col-val}

};

- Errors

15) **Strings in C and C++**

- What is a string
- Syntax for declaring a string
- Syntax for initializing a string
- To read a string from keyboard
- Errors

16) **String Library Functions in C and C++**

- What are string library functions.
- Types of string library functions
  - Strcpy
  - Strlen
  - Strcmp
  - Strcat
- Errors

Advanced level

17) **Working with Structures in C and C++**

- Introduction
- Syntax of structures
- Declaration and initialization
- Declaration of structure variable
- Accessing structure variables

18) **Understanding Pointers in C and C++**

- Introduction
- Syntax of Pointer
  - example: int *iptr;
- Declaration
  - example:

int a; (integer a) int *aptr; (pointer to an integer *aptr) aptr = &a; (aptr set to address of a) Address Pointer

- Errors

19) **Function call in C and C++**

- types of function calls
- function pass by value
- function pass by reference

20) **File Handling in C**

- File handling functions
- Opening a File closing a file
  - example: fopen, fclose
- Reading data from a File

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Java

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Introduction

- Java is the most popular class-based, object-oriented, high-level programming language.
- Developed by James Gosling at Sun Microsystems and released in 1995 as a core component of Sun Microsystems' Java platform.
- Derives much of its syntax from C and C++.
- Is typically compiled to bytecode (class file). It can be run on any Java Virtual Machine (JVM) regardless of the architecture.
- Is specifically designed to have few implementation dependencies.
- Is Intended to let application developers write a code that runs on one platform & does not need to be recompiled to run on another.

Java has characteristics of Object-Oriented languages

- **Inheritance:** Creating new classes & extending them to reuse the existing code and adding new features as needed.
- **Encapsulation:** combining the information and providing the abstraction.
- **Polymorphism:** Providing different functionality by the functions having the same name, based on the signatures of the methods.
- **Dynamic binding:** Providing maximum functionality to a program about the specific type at runtime.

Features

Platform independence:
Key feature of Java language is write-once-run-anywhere (WORA) concept. With Java, you can run the code written on any system.

Simplicity:
Programs are easy to write and debug. Java provides a bug-free system due to strong memory management.

Portability: Java feature write-once-run-anywhere makes it portable, provided that the system has an interpreter for JVM.
Also, Java has standard data size irrespective of the OS or the processor.

Performance: Uses native code and lightweight process called threads.
The advance version of JVM uses adaptive and just-in-time compilation technique to improve the total performance.

Distributed: Widely used protocols like HTTP and FTP are developed in Java.
Internet programmers can call functions on these protocols and can access the files from any remote machine on the internet, rather than writing codes on their local system.

Secure:
- Programs in Java run under an area known as the sandbox.
- Security manager determines the accessibility options of a class like reading and writing a file to the local disk.
- Uses public key encryption system to allow the java applications to transmit over the internet, in a secure and encrypted form.
- The bytecode verifier checks the classes after loading.

Robust:
Java has
- Strong memory allocation.
- Automatic garbage collection mechanism.
- Powerful exception handling.
- Type-checking mechanism.
- A compiler that checks the program for any errors and interpreter checks any runtime errors and makes the system secure from crashes.

Online web tutorials for Java

Contents

Basic Level

Introduction to Java

1. Getting started with Java – installation
   - Install jdk from Synaptic Package Manager
   - Choose openjdk-6-jdk from the list of packages available
   - Mark it for installation
   - The installation will take a few seconds
   - Verify the installation
   - At the command prompt type java -version, so the version number of the jdk will be displayed
   - Run a simple java program and see if it works
   - Type javac TestProgram.java for compiling the code and java TestProgram for executing the code
2. Java - First program
   - write simple java program
   - print "My First Java Program!" on Console
   - save the file
   - file name given to the java file
   - compile the file
   - run the file
   - correct the errors
   - naming conventions for class
   - naming conventions for method
   - naming conventions for variable

Eclipse

3. Installing Eclipse
   - Install Eclipse on Ubuntu on the Terminal
   - Set up the proxy on the Terminal
   - Then fetch the list of all the available softwares
   - Type sudo apt-get update
   - Then install eclipse on the Terminal
   - Type sudo apt-get install eclipse
   - Verify if Eclipse is installed on the system
   - Installing Eclipse on Debian,Kubuntu,Xubuntu
   - Installing Eclipse on Redhat
   - Installing Eclipse on Fedora,centos and suse linux
4. Getting started with Eclipse
   - Eclipse is an Integrated Development Environment
   - It is a tool on which one can write, debug and run java programs easily
   - Open Dash Home and type Eclipse in the search box.
   - We get Workspace Launcher
   - On clicking on Workbench we get the Eclipse IDE
   - Go to File->New->Project and select Java Project
   - Create a project named EclipseDemo and create a class inside DemoClass
   - Learn about Package Explorer and Editor portlet
5. Hello World Program
   - Open Eclipse
   - Create a Java Project named DemoProject
   - Create a class named DemoClass
   - Class name and file name will be the same
   - Eclipse suggests various possibilities as we type a command
   - Eclipse also completes the parentheses by automatically adding the closing parentheses
   - Include the statement that we want to print
   - Eclipse also completes the quotes by adding the closing quote

- Compile and execute the program
- Change the code to print

6. Errors and Debugging
   - When writing a Java Program, here is a list of typical errors:
   - Missing semicolon(;)
   - Missing double quotes(".")
   - Mis-match of filename and classname
   - Typing the print statement n lower case
   - The line which has the error will be indicated with a red cross mark on the left margin
   - The list of errors is displayed by hovering the mouse over the cross mark
   - Create a class ErrorFree with Errors, debug the code and run it
   - Eclipse also offers intelligent fixes
7. Programming features of Eclipse
   - Auto completion
   - Sets the corresponding closing brace when we open the brace
   - Provides a drop-down list of methods when you start typing the code.
   - Syntax highlighting
   - Classname is highlighted in pink color and method in blue color.
   - Keyboard shortcuts
   - F11 to debug a program and Ctrl plus H to search a specific file.
   - Error highlighting
   - Cross symbol in the program denotes errors
   - Remove semicolon and error details are displayed when mouse is hovered over cross symbol.

Fundamental Programming Structures in Java

8. Numerical datatypes
   - Define datatypes and numerical datatypes
   - int
   - float
   - byte
   - short
   - long
   - double
   - range of each numerical datatypes
   - declaration and initializationof numerical datatypes.
   - valid and invalid declaration
9. Arithmetic Operations
   - Define an operator
   - Define arithmetic operators
   - addition
   - subtraction
   - multiplication
   - division
   - modulo
   - simple program to demonstrate arithmetic operators
   - appropriate datatypes for appropriate values
   - save, compile and run the program
10. Strings
    - char datatype
    - letter, digit, punctuation marks, **tab**, or a space are all characters.
    - Program explaining the variable and the character data.
    - Introduction to strings
    - Creating string by Direct Initialization
    - Creating string by using new operator
    - String length()
    - String concat()
    - String toUpperCase()
    - String toLowerCase()
11. Primitive type conversions
    - define type conversion or type casting

- higher order integer to lower order integer- Explicit type casting
- program to show explicit type casting
- common mistake in explicit type casting.
- program to show common mistake in explicit type casting
- lower order integer to higher order integer – Implicit type casting
- program to show implicit type casting
- char to integer
- integer to char
- program to show char to int type casting.

Control flow

12. Relational Operations
    - boolean datatype
    - equal to and not equal to
    - less than and less than or equal to
    - greater than and greater than or equal to
13. Logical Operations
    - use of logical operators
    - and (&&) operator
    - example to explain **and** operator
    - program to demonstrate **and** operator
    - or (||) operator
    - example to explain **or** operator
    - program to demonstrate **or** operator
    - not (!) operator
    - program to demonstrate **or** operator
    - save, compile and run the programs
14. if else construct
    - Conditional Statements and types of Conditional Statements
    - Use of if statement
    - Syntax for if statement
    - Program using if statement
    - Use of if else statement
    - Syntax for if else statement
    - Program using if else statement
    - Use of if else if statement
    - Syntax for if else if statement
    - Program using if else if statement
15. nested if and ternary operator
    - explain nested if
    - nested if syntax
    - program to demonstrate nested if
    - explain the control flow of the program
    - explain ternary operator
    - syntax for ternary operator
    - explain the syntax
    - program to demonstrate ternary operator
    - comparison between ternary operator and nested if
    - save, compile and run the program
16. switch statement
    - define switch case statement
    - compare switch and nested if
    - switch case syntax
    - working of a switch case statement
    - use of keyword switch
    - valid and invalid use of keyword **case**
    - use of keyword default
    - use of keyword break
    - program to demonstrate switch case statement
    - save, compile and run the program to check the output

17. while loop
    - Loop control statement
    - types of loop control statements
    - Introduction to while loop
    - syntax of while loop
    - Program using while loop
    - Check the output.
    - Introduction to infinite loop
    - loop variable modification
    - Check the output
    - How to terminate the infinite loop
18. for loop
    - syntax
    - introduction to for loop
    - for loop syntax
    - loop vaiable
    - loop condition
    - loop variable increment or decrement
    - loop block
    - flow of loop
    - advantage of using loop
19. do while loop
    - define do while
    - do while syntax
    - working of do while loop
    - example of do while loop
    - explain the do while programming
    - save, compile and run the program to check the output
    - how different is it from the while loop
    - program to demonstrate the differences

Arrays

20. Introduction to Arrays
    - About Arrays
    - Declare an Array
    - Initialize an array
    - Intilalization using for loop
    - Index of an array elements
    - change values of an array
    - print the value of an array
    - Advantage of an array.
21. Array operations
    - import java.util.Arrays
    - use methods from class Arrays
    - toString() method
    - sort() method
    - fill() method
    - copyof() method
    - copyofRange() method
    - about parameters for each method.

Classes & Objects

22. Creating class
    - Whatever we can see in this world are all objects
    - Objects can be categorized into groups known as class
    - This is class in real world
    - Human Being is an example of class in real world
    - Class in java is the blue print from which individual objects are created
    - Class consists defines a set of properties called variables and a set of behaviors called methods
    - Syntax for creating class

- Create a simple class Student using Eclipse
- The Student class can contain properties

23. Creating Object
    - An object is an instance of a class
    - Each object consist of state and behavior
    - Object stores it state in fields or variables
    - It exposes its behavior through methods
    - Reference variables
    - Create a class named TestStudent
    - Create an object of the Student class
    - Use new operator
    - Check what the reference variable contains
    - Create one more object of the Student class and check what the reference variable contains
24. Instance fields
    - Also known as non-static fields
    - Open the TestStudent class which we have created
    - Access the fields roll_number and name using dot operator
    - See the output
    - Initialize the field and see the output
    - Change the modifier of the fields to private
    - Debug the error that you get
    - Change the modifier to protected
    - Each object of a class will have unique values
    - Create two objects of the Student class
25. Methods
    - method definition
    - write simple method
    - method returning value
    - call a method in another method
    - flow of the program
    - call a static method
    - call a method from another class
    - method signature
    - method body

Constructors

26. Default constructor
    - what is a constructor?
    - what is a default constructor?
    - when is it called?
    - define a constructor
    - initialize the variables
    - call the constructor
    - difference between constructor and method
27. Parameterized constructors
    - What is a parameterized constructor?
    - create constructor without parameter
    - create a constructor with parameter
    - assign values to the variables in the constructor
    - pass arguments during the constructor call
    - working of parameterized constructor
    - show common errors
    - resolve the errors
    - create another parameterized constructor
    - why to use constructor?
28. Using this keyword
    - this is a reference to the current object
    - helps to avoid name conflicts
    - we can use this keyword inside a constructor to call another one
    - the constructors must be in the same class

- explicit constructor invocation
- Explain it using the parameterized constructor code
- Make this statement the last one in the constructor
- You will get an error
- this statement should be the first one inside a constructor

29. Non-static block
    - Non-static block
    - Any code written between two curly brackets
    - Executed for each object that is created
    - Executes before constructor's execution
    - can initialize instance member variables of the class
    - create a class named NonStaticTest
    - Create a non-static block and a constructor inside it
    - Check the output
    - Include multiple non-static blocks
    - they will be executed in the sequence in which they appear in the class
    - Check the output
    - Non-static block is not a substitute for constructor
30. Constructor Overloading
    - define multiple constructor
    - what is constructor overloading?
    - constructor with different number of parameters.
    - parameters with different datatypes.
    - how is constructor overloaded?
    - flow of overloading process.
    - advantage of constructor overloading.
31. Method Overloading
    - define multiple methods.
    - methods with same name.
    - methods with different number of parameters.
    - methods with different datatypes of parameter.
    - what is method overloading?
    - example for overloadin method
    - how to overload method?
    - advantage of method overloading.
    - error in method overloading.
32. Taking user input in Java
    - What is BufferedReader?
    - Importing three classes from Java.io package
    - How to take the input from the user?
    - Syntax to implement BufferedReader
    - What is InputStreamReader?
    - Create object of InputStreamReader
    - Create object of BufferedReader
    - About IOException
    - About throws keyword
    - Typecasting

Intermediate Level

1. Subclassing and Method Overriding
    - Definition of subclassing
    - Demo of subclassing using an Employee and Manager class
    - Single inheritance
    - Use of extends keyword
    - Private members in a super class
    - Definition of method overriding
    - Annotation
    - @Override Annotation
2. Calling methods of the superclass
    - super keyword
    - Call methods of the super class

- Constructor of the super class
- Demo of super keyword using an Employee and Manager class
- Single inheritance
- Use of extends keyword
- Private members in a super class

3. Using final keyboard
   - final keyword
   - What is final keyword and its application?
   - Where final keyword can be declared?
   - final variable
   - final static variables
   - static block
   - final variable as parameter
   - final method
   - private final method
   - final class
4. Polymorphism
   - Polymorphism in Java
   - Run-time polymorphism
   - Virtual Method Invocation
   - Compile-time polymorphism
   - Role of JVM
   - IS-A test
   - Static binding
   - Dynamic binding
5. Abstract Classes
   - Abstract Classes in Java
   - What are Abstract Methods
   - What are Concrete Methods
   - Properties of Abstract Methods and Abstract Classes
   - How to use Abstract Methods
6. Java Interfaces
   - Java Interfaces
   - Implementing Interface
   - Implementation Classes
   - Interfaces Vs Abstract classes
   - Implementing Multiple Interfaces
   - Usage of Interfaces with an example
7. Static Variables
   - What is Static Variable in Java?
   - Usage of Static Variables with Example
   - Static Variables Vs Instance Variables
   - Final Static Constants
8. Static Methods
   - What is static method in Java?
   - Static methods Vs Instance methods
   - Usage of static method with example
   - Passing object variables in a static method
9. Static Blocks
   - What is a static block
   - Declaring and defining a static block
   - How static blocks are invoked and executed
10. Exception Handling
    - What is an Exception
    - Types of Exceptions
      1. Checked Exceptions
      2. Unchecked Exceptions
    - Explaining *ArrayIndexOutOfBoundsException*
    - Demonstrating Checked Exceptions with example
    - Handling Exceptions using try-catch blocks

- Explaining *ArithmeticException*
- Demonstrating Unchecked Exceptions with example
- Explaining *FileNotFoundException*
- Usage of finally block
- Explaining *NullPointerException*

2. Custom Exceptions
   - What is a Custom Exception
   - Demonstration of custom exception
   - Custom exception example - "InvalidMarkException"
   - Usage of "throw" keyword
   - How to resolve errors in custom exceptions
   - Resolve error using "Add throws declaration" option
   - Usage of "throws" keyword
   - Example for "FileNotFoundException"
   - How to handle multiple exceptions
   - How to use "surround with try/catch" option

The Spoken Tutorial project

*Self-explanatory - uses simple language

*Audio-video - uses multisensory approach

*Small duration - has better retention

*Learner centered - learn at your own pace

*Learning by doing - learn and practice simultaneously

*Empowerment - learn a new FOSS

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*Students - High School and College

*Working professional - Software users, developers and trainers

*Research scholars

*Community at large

Workshops

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The Spoken Tutorial Project is funded by the National Mission on Education through Information and Communication Technology, Ministry of Human Resource Development, Government of India.

Contact us

Email: contact@spoken-tutorial.org

Website: http://spoken-tutorial.org

IIT Bombay

Spoken Tutorial

LaTeX

National Mission on Education through Information and Communication Technology (NMEICT)
www.sakshat.ac.in

Funded by MHRD, Government of India

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What is LaTeX?

aTeX is a document preparation system for
igh-quality typesetting. Often used for
echnical or scientific documents, it can
e used for almost any form of publishing:
etter, report, textbook, etc...
aTeX lets authors get with writing
locuments without being bothered about
locument design.

)ownload LaTeX from
ttp://tug.org/begin.html

Benefits of LaTeX:

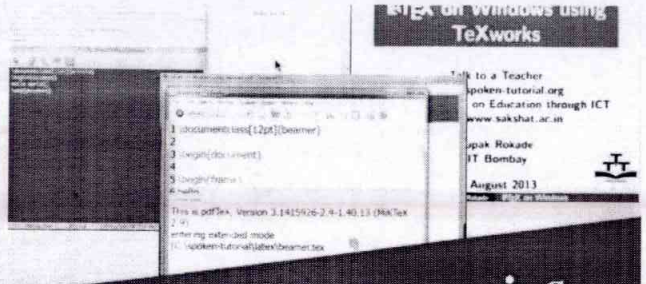
enefits of LaTeX:

Works on all OS: Linux, Windows, Mac OSX.
Easily typesets journal articles, technical
eports, books and slide presentations.
Controls large documents containing
ectioning, cross-references, tables and
igures.
Typesets complex mathematical
ormulae with ease.
Advanced typesetting available for
mathematical equations.
Automatic generation of bibliographies
nd indexes.
Multi-lingual typesetting.

*Inclusion of artwork and process or spot colour.
*U s PostScript or Metafont fonts.
*Very active user community.

Xfig

*Xfig is a free and open source vector graphics editor. It is a drawing tool for use on the Linux and UNIX services.
*Xfig was written by Supoj Sutanthavibul in 1985.
*In Xfig, figures may be drawn using objects such as circles, boxes, lines, spline curves, text etc.
*It is also possible to import images in formats such as GIF, JPEG, EPS, PostScript etc.
*These objects can be created, deleted, moved or modified. Attributes such as colours or line styles can be selected in various ways.
*Xfig has a facility to print figures to a Post-Script printer too.
*Convenient feature is the PSTEX or PDFTEX export format. This allows a smooth integration of Xfig-generated images into LaTeX documents.
*Most operations in Xfig are performed using the mouse. But some operations may also be performed using keyboard (accelerators) shortcuts.
*The interface is designed for a three-button mouse, although it is also possible to use a two button or a one button mouse with appropriate emulation.



Tutorials in the series

*LaTeX on Windows using TeXwork
*What is Compiling?
*Letter Writing
*Report Writing
*Mathematical Typesetting
*Equations
*Tables and Figures
*Beamer
*Bibliography
*Inside story of Bibliography
*Simple block diagram
*Feedback control diagram
*Feedback diagram with Maths

These tutorials are also available in many Indian languages such as English, Hindi, Bengali, Bhojpuri, Gujarati, Kannada, Marathi, Sanskrit, Tamil, Telugu.

Online web tutorials for LaTeX
Contents

Basic Level LaTeX

1. LaTeX on Windows using TeXworks
   - Installing MikTeX on Windows
   - Writing basic LaTeX document using TeXworks editor
   - Configuring MikTeX to download missing packages
2. Report Writing
   - report style having chapter, section and subsection
   - article style having section, subsection and subsubsection
   - Automatic generation of table of contents
   - toc file to store the information that goes into the table of contents
   - Automatic numbering of section numbers
   - Appendix; its appearance in report and article style
   - exiting from LaTeX when a compilation error occurs
3. Letter Writing
   - Letter document class
   - From address
   - Automatic generation and format of date
   - Starting a new line with double slash
   - To address
   - Starting a new paragraph with a blank line
   - itemize environment for bullet points
   - enumerate environment for numbered points
   - Closing statement
   - Signature
   - Carbon copy
4. Mathematical Typesetting
   - $ sign to begin and end mathematical expressions
   - Creating alpha, beta, gamma and delta
   - Space being used as a terminator of symbols
   - Creating spaces in mathematical formulae
   - Difference in font of text and formula
   - Difference in the minus sign in text and in formula
   - frac command to create fractions
   - Subscripts and superscripts
   - Use of braces {} to demarcate arguments
   - Not equal to, greater than or equal to, less than or equal to, much less than
   - Right arrow, left arrow, left right arrow, up arrow
   - Integral sign, limits of an integral
   - Matrices of different rows and columns
5. Equations
   - amsmath package and align and align* environments to create equations
   - Matrix differential equation
   - aligning two equations using &, with and without intervening text
   - Automatic numbering of equations using align
   - Labeling equations with the label command
   - Cross referencing equation numbers through the ref command
   - Inserting text between two aligned equations through the intertext command

- Automatic generation of equation numbers at run time allows insertion and removal of an equation from a set of equations
- Labeling sections and subsections for easy and fool-proof cross referencing
- Breaking an equation into more than one line
- Suppression of equation numbers in the align environment using the nonumber command
- Use of backslash (\) to make braces appear as braces
- left[. right] and also left[. (i.e. left bracking fullstop)
- Blank lines in the align environment is not permissible

6. Numbering Equations
   - amsmath
   - numbering equations
   - align environment
   - nonumber command
   - labelling equations with the label command
   - cross referencing equations with the ref command
   - case dependence of variables in label command
   - taking help from stackexchange
   - learning from ltx-primer.pdf
   - typing if-else with cases command
7. Tables and Figures
   - Creating tables and figures in Latex
8. Beamer
   - Creating a presentation using a Beamer
9. Bibliography
   - Creaing Bibliography in Latex

Intermediate Level

1. Feedback diagram with Maths
   - Open the .fig file saved in the feedback control tutorial
   - Put SG(z) = \frac z{z-1}$ in the second block diagram
   - Choose the special flag
   - Save and export it as combined tex and pdf
   - Show that if "special" is not chosen, we get only text
   - Change /frac into /dfrac
   - Show that at the time of compilation, dfrac unknown error
   - Include \usepackage{amsmath} in the tex file
   - Recompile it and show that the equation is now coming properly
   - Use pdfcrop to trim the pdf file, mention Briss
2. newcommand in LaTeX
   - What is a command?
   - Different types of commands with examples
   - Defining a new command
   - Defining short commands for long repeated input.
   - Commands with parameter
   - Passing parameters to the commands defined
   - Renewcommand
   - Redefining the existing commands to the required output
3. newenvironment in LaTeX
   - What is an environment?
   - Defining a new environment
   - Defining environments with parameters
   - Renewenvironment
   - Redefining an existing environment to the required output
4. Writing Style Files in LaTeX

- About LaTeX Styles files.
- Writing a Style file for LaTeX.
- Importing a Style file in LaTeX.
- Defining a standard Style file for LaTeX.
- newcommand in LateX.newenvironment in LaTeX.
- RequirePackage command in LaTeX.
- usepackage command in LaTeX.
- Style file identification.
- Preliminary declarations of a Style file.
- NeedsTeXFormat.
- ProvidesPackage.

5. Indic Language Typesetting in LaTeX
   - Typeset a document in Indic language using XeLaTeX.
   - Indic language fonts bundle.
   - Installing Indic language Fonts.
   - Installing Nirmala UI Fonts.XeLaTeX Compiler.
   - Using Fontspec package.
   - Using Polyglossia package.
   - Select language command.
   - Set default language in LaTeX.
   - Set other language in LaTeX.

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Contact us

Email: contact@spoken-tutorial.org
Website: http://spoken-tutorial.org

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Spoken Tutorial

LibreOffice
The Document Foundation

National Mission on Education through Information and Communication Technology (NMEICT)
www.sakshat.ac.in

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http://spoken-tutorial.org

Libreoffice Introduction

LibreOffice is a powerful free and open source personal productivity suite for Windows, Macintosh and GNU/Linux OS.

It gives you six feature-rich applications for all your document production and data processing needs: Writer, Calc, Impress, Draw, Math and Base.

These tools are supported and documentation is free from a large, dedicated community of users, contributors and developers. The comparison with Microsoft office suite

would be as follows:

- Writer = Word
- Calc = Excel
- Base = Access
- Impress = PowerPoint

It also offers Draw, a program the lets you build sketches and diagrams and Math an equation editor.

Features

*LibreOffice is a comprehensive, professional quality productivity suite available for free.

*It is available in more than 30 languages and for all major operating systems, including Microsoft Windows, Mac OS X and GNU/Linux.

*It's free & requires no license costs or annual fees.

*It has no language barriers- It's available in a large number of regional languages.

*Public license- use it, customize it, hack it and copy it.

LibreOffice suite gives you high quality & very proffessional tools.

* Simple-to-use yet powerful interface that is easy to personalize.

* It is designed to be compatible with other major office suites.

* It is compatible with all popular file formats like doc, docx, xls, xlsx, ppt, pptx

What Libreoffice offers

Writer

This is the word processor component of LibreOffice suite. This is a handy tool for drafting a letter to producing an entire book with tables of contents, illustrations and diagrams. It gives you the option of auto-completion, auto-formatting and automatic spell check while you type.

Calc

Calc is the spreadsheet management tool of LibreOffice Suite. It helps in managing your numbers and data effeciently.Analyze your data with Calc and then use it to present your final output. A fully-integrated help system makes easier work of entering complex formulae.

Impress

This is the fastest and easiest way to create effective multimedia presentations. You can incorporate animation and special effects in your presentation using Impress.

Draw

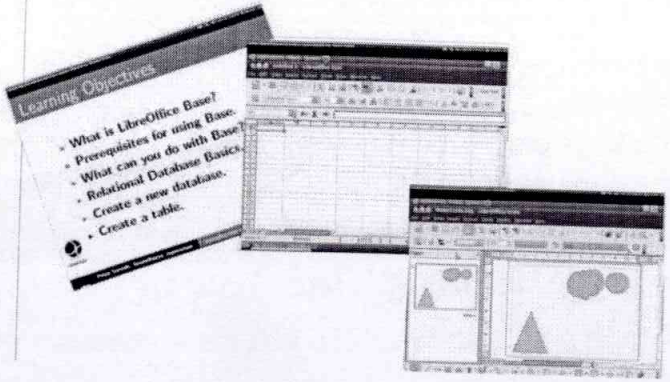
Draw lets you build diagrams and sketches from scratch. A picture is worth a thousand words, so why not try something simple with box and line diagrams? easily createlowcharts, route maps & other such basicdiagrams. Or else go further and easilybuild dynamic 3D illustrations with special effects.

Base

This is the database front end of the LibreOffice suite. With Base, you can seamlessly integrate your existing databasestructures into the other components of LibreOffice, or create an interface to use and administer your data as a stand-alone application.

Math

It is a simple equation editor that lets you layout and display your mathematical, chemical, electrical or scientific equations quickly, in standard written notation. Even the most- complex calculations can be understood, when displayed correctly.



Contents

Basic Level

Promo of LibreOffice Suite

- LibreOffice promo
- Features of LibreOffice
- Uses of LibreOffice
- LibreOffice formats
- LibreOffice tutorials in Spoken Tutorial
- Applications of LibreOffice
- LibreOffice tutorials in various languages

2. Introduction to LibreOffice Calc
   - What is Calc,Who should use Calc,What can be done using Calc.
   - About spreadsheets,sheets and cells.
   - Basic features – parts of main Calc window - Title & Menu Bar, Standard Toolbar, Formatting Toolbar, Formula Bar, Status Bar
   - What is a cell, row, column, Create new document, enter data in one cell, save in Calc(CSV and other formats),opening/closing document.
   - Save as ods, csv, xls, xlsx and export to PDF
3. Working with Cells
   - How to enter numbers,text,numbers as text,date and time in Calc.
   - How to use the Format Cells dialog box.
   - How to Navigate between cells and in between sheets.
   - How to select items in rows,columns and sheets.
4. Working with Sheets
   - Inserting and Deleting rows and columns Calc.
   - Inserting and Deleting Sheets in Calc.
   - Renaming Sheets.
5. Formatting Data
   - Borders, Color, Formatting Text, Increasing Cell Size
   - Formatting multiple lines of text,numbers,fonts,cell borders,cell background
   - Automatic Wrapping and Using manual breaks
   - Merging cells, rows and columns, issues with using merge cells.
   - Shrinking text to fit the cell
6. Basic Data Manipulation
   - Paste and paste special (values, transpose), pasting a spreadsheet into writer as a table
   - Introduction to Formulas – Sum, Average, basic formula (=a*b+c)
   - Subtotal
   - Different kinds of functions available in spreadsheet
   - Sorting by Columns
   - Filtering Data - Basics
7. Working with data
   - Speed up using Fill tools and Selection lists.
   - Sharing content between sheets
   - Remove data,Replace data,Change part of a data.
8. Viewing and printing a document
   - Views options – Zoom option,Freezing and Splitting of screen, Page break view
   - Printing options and settings, header, footer
   - Print Margin

Intermediate Level

Using Charts and graphs in Calc

- Creating,Editing and Formatting Charts
- Types of charts
- Resizing and moving of charts

2. Images and graphics in Calc
   - Inserting images in Calc
   - Modifying images
3. Advanced Formatting and Protection
   - Cell Protection
   - Ranges
   - Validity
4. Formulas and Functions
   - Creating formulas,operator types and referencing
   - Basic arithmetic and statistic functions - relative and fixed ($) referencing in a function
   - Rounding off numbers
   - If..else
   - Important string functions (left, right, middle, concatenate)
5. Linking Calc Data
   - Referencing other sheets and documents
   - Working with Hyperlinks

Advanced Level

1. Auto-formatting cells and sheets
   - How auto-formatting is done
   - Defining a new auto-format
   - Using themes and Conditional formatting
   - Hiding and showing data
2. Sharing and Reviewing
   - Recording Changes
   - Adding comments to changes
   - Accepting/Rejecting changes
   - Header and footer
3. Macro in Calc
   - Using macro recorder
   - Writing own functions in macro
   - Editing a macro,playing a macro, deleting a macro
4. Working with Styles
   - Types of Styles
   - Modifying Styles
   - Creating new styles
5. Data manipulation
   - Convert text to columns
   - Convert columns to txt
6. Data Analysis
   - Creating scenarios
   - Changing scenarios
   - Working with scenarios using navigator
   - Multiple operations in rows and columns
7. Data Pilot
   - Data source
   - Data pilot dialog
   - Working with the results of data pilot.
   - Filters

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Research scholars

Community at large

/orkshops

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Contact us

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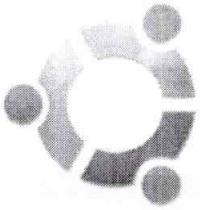
Website: http://spoken-tutorial.org

IIT Bombay

SPOKEN TUTORIALS



Linux + Ubuntu

National Mission on Education through Information and Communication Technology (NMEICT)
www.sakshat.ac.in

http://spoken-tutorial.org

What makes Linux endearing to users? Linux consists of the kernel, libraries, and various applications. Each distribution of Linux is a different combination of these elements. And Ubuntu has found the favour of several users making it the most popular.

What is Ubuntu Linux?

Ubuntu is an ancient African word meaning 'humanity to others'. It also means 'I am what I am because of who we all are'. The Ubuntu Linux operating system brings the spirit of Ubuntu to the world of computers.

Ubuntu is one of the latest and most widely downloaded distributions of Linux. It is the most popular flavor of Linux.

So, what are the benefits of Linux and Ubuntu?

1. Freeware software: One of the greatest advantages of Linux OS is that it is free of cost; it does not include any paid subscriptions, paid premium editions, or extra paid software. There is very little maintenance cost and it is easy to run and maintain. Further, if you just want to check out the Linux OS, you have the option to boot from a CD, without installation, and try out the Linux experience.
2. Manageability: Linux is easy to manage, starting right from its installation, startup, shutdown, initialization, and package management. It is simple to deploy and you can complete a typical installation of the standard services within 15 minutes. Also, it does not include any additional extraneous applications, making it fast and efficient.
3. Easy to upgrade and update: The Linux OS is easy to install and upgrade to obtain the latest features. Also, the process of obtaining updates is eased through the Debian and APT packaging, which makes the introduction of new software easy and smooth.
4. Security: Linux is hard-to-hack. To add to that, the frequent updates ensure that any further security risks are also eliminated.
5. Vast source of online help: There are little chances of getting stuck while installing or working with Linux. This is because of a large source of online help available for any issue related to Linux.
6. User-friendly: Ubuntu is user-friendly and easily available. It can also be easily installed. Ubuntu is one OS, currently being considered as the best bet for those struggling and considering moving away from Windows OS. Ubuntu is a clear indication that users are beginning to accept Linux as a better OS. Whether it is for personal use, for your organization or for propagating computer education among your community, Linux is the ideal choice. Its secure environment, user-friendliness and above all its ease of installation, makes it the most favoured OS among most users.
7. Add-ons: Linux is free and requires no costly add-ons. Download Linux from the Internet and install it on as many machines as you want. The same is true of most Linux application software.

So, why Linux?

Support

Ubuntu & Linux are the best supported operating systems of all time. You can get help from tens of thousands of active Linux users and programmers from all over the world, at any time.

Multi-platform

Windows is limited to Intel and Intel-compatible processors and only certain machine architectures. Linux and other Unix-compatible operating systems work on a wide variety of processors and machine architectures.

Open Protocols

Linux uses open protocols. There are no proprietary protocols that lock you. Monopolies do not exist in the Linux world.

With Linux, you can

- Browse the internet with Mozilla Firefox browser – easier, safer and faster, less susceptible to virus infections.
- Do office activities with LibreOffice Suite-a complete suite for document creation, spreadsheet, presentation, design and database. It supports all formats including MS-Word, MS-Excel, MS-Powerpoint.
- Program using Java, Python, C/C++, Shell-script, PHP & MySQL and many more.
- Create graphic designs using GIMP, Inkscape – for photo retouching, image composition and image authoring (equivalent to Photoshop).
- Use multimedia players like VLC, Movie Player for music and videos.

Do all of these & more without purchasing expensive commercial software. Use the Ubuntu Software Centre facility to download any software.

- chown, chmod, chmod -R, displaying files with ls -l
- chmod u+, chmod a-w, chmod g+w, chmod -r, chgrp
- inode, hard link, symbolic link

9. Redirection Pipes
   - Input,output and error stream
   - Redirection : > and >>
   - Pipes : |
10. Working with Linux Process
    - Process
    - Shell process
    - Process spawning - parent and child process
    - Process attributes - pid, ppid
    - Init Process
    - User process & System process
    - ps with options
11. The Linux Environment
    - Environment variable vs Local variables
    - set command
    - env command
    - SHELL, HOME, PATH, LOGNAME, PS1, PS2
    - history
    - ! and ~
    - alias
12. Basics of System Administration
    - Root login-su
    - User management - UID, GID, useradd, usermod, userdel
    - Discs – Du, df
13. Simple filters
    - Head
    - tail
    - sort
    - cut
    - paste

Introduction to Linux - Intermediate

1. The grep command
   - To see the content of a file
   - To list the entries of a particular stream
   - To ignore cases
   - Lines that do not match the pattern
   - To list the line numbers with the entries
   - To store the result in another file
   - To know the count
2. More on grep command
   - Search using grep
   - To match more than one pattern
   - To check a word that has different spelling
   - Character class
   - The use of *
   - To match any one character using dot
   - To match a pattern at the beginning of the file
   - To match a pattern at the end of the file
3. The sed command

Online web tutorials for Linux
Contents

Introduction to Linux - Novice

1. Ubuntu desktop
   - Ubuntu Desktop
   - Main Menu
   - System Tray
   - Trash Bin icon (RHS corner)
   - Desktop icon (LHS corner), pen-drive
2. Synaptic package manager
   - Synaptic Package Manager
   - How to install packages
3. Ubuntu software system
   - Ubuntu-Software-Center
   - Installing softwares through Ubuntu Software Center
4. Basic Commands
   - Commands with example
   - Command interpreter
   - Shell
   - Using man
   - Apropos
   - Whatis
   - Using --help option
5. General Purpose Utilities in Linux
   - echo
   - uname
   - who
   - passwd
   - date
   - cal
   - Brief overview on Files and directories
   - pwd
   - ls
   - cat
6. File System
   - File
   - Directory
   - File Inode
   - Types of Files
   - Home directory and Current directory
   - Change Directory(cd)
   - mkdir,rmdir
7. Working with Regular Files
   - cat
   - rm
   - cp
   - mv
   - cmp
   - wc
8. File Attributes

- sed
- To print using sed
- Line Addressing
- Context Addressing

4. More on sed command
   - substitute
   - insert
   - delete
5. Basics of awk
   - Awk Preliminaries
   - Selection criteria
   - action
   - Formatted printing - printf
   - Fields and -F option
   - Regular expressions
   - NR - number of records
   - Variables
6. Networking tools
   - Ping
   - Telnet
   - ftp
   - ssh
   - scp & sftp
7. Linux Process
   - Fork
   - Exec
   - Wait
   - Nice
   - Kill with options
8. More about Linux Process
   - Cron, crontab

About the Spoken Tutorial project

- Self explanatory - uses simple language
- Audio-video - uses multisensory approach
- Small duration - has better retention

Learner-centered - learn at your own pace

- Learning by doing - learn and practice

Simultaneous empowerment - learn a new FLOSS

Target Audience

- Programmers
- Software Developers
- Web Developers

The Spoken Tutorial Project Team conducts workshops on Perl and other FLOSS using spoken tutorials and gives certificates to those who pass an online test.

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Contact US:
Email: contact@spoken-tutorial.org
Website: https://spoken-tutorial.org

Spoken Tutorial

https://spoken-tutorial.org

Perl

National Mission on Education through Information and Communication Technology (NMEICT)
www.sakshat.ac.in
Funded by MHRD, Government of India.

ntroduction

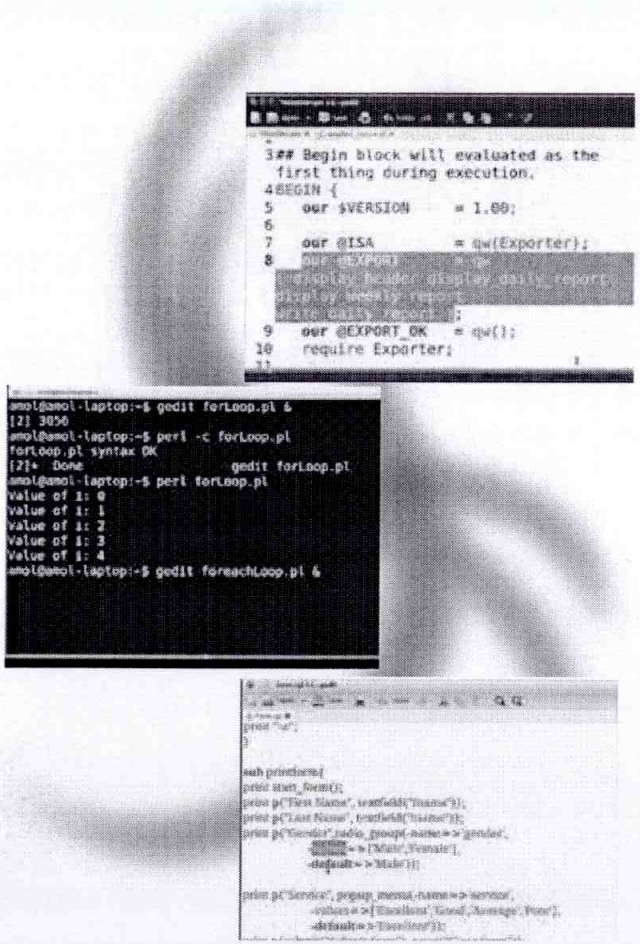
- Perl is Practical Extraction and Reporting Language
- It is a free and open source language
- It is used for system administration, network programming, web applications and developing a variety of software applications

Download and Installation

- Perl is preinstalled in Ubuntu Linux OS
- Download Perl for Windows from https://www.perl.org

Features

- Perl works on Linux, Windows and Mac operating system
- Perl is very easy to learn
- It is extremely portable. It can run on any operating system that has Perl interpreter installed, so it is platform independent
- It supports both procedural and object-oriented programming
- Perl will be the best language which is good in File handling, text processing and output reporting
- Perl is extensible. There are over 20,000 third party modules available from the Comprehensive Perl Archive Network(CPAN)
- Perl works with HTML, XML and other mark-up languages
- Perl has a database integration interface that supports several widely used relational database management systems (RDMBS) such as ORACLE, MySQL, Sybase and PostgreSQL



Spoken Tutorials in Perl Series

Basic Level Tutorials

- Overview and Installation of Perl
- Variables in Perl
- Comments in Perl
- for – for each loops
- while – do while do loops
- Conditional statements
- More conditional statements
- Data Structures
- Arrays
- Array functions
- Hash in Perl
- Functions in Perl
- Blocks in Perl

Intermediate Level Tutorials

- Access Modifiers in Perl
- Referencing and Dereferencing
- Special Variables in Perl
- File Handling
- Exception and error handling in Perl
- Including files or modules
- Sample Perl Program
- Perl Module Library(CPAN)
- Downloading CPAN Module
- Perl and HTML

Online web tutorials for Perl
Contents

Basic Level

Topics

1. **Overview and Installation of Perl**
   - Installation of Perl 5.14.2 on Ubuntu Linux
     - Installing XAMPP in Linux

(XAMPP is a cumulative package consisting of Apache, PERL, PHP and MySQL Packages is available for Linux)

- Default Webserver directory will be set to "opt"

OR

- Using default Perl installation available in Synaptic Package Manager
- Installation of Perl 5.14.2 on Windows
  - Installing XAMPP in Windows

(XAMPP is a cumulative package consisting of Apache, PERL, PHP and MySQL Packages is available for Windows)

- Default Webserver directory will be set to "htdocs"

2. **Variables in Perl**
   - Variables are used for storing values, like text strings, numbers or arrays
   - All variables in PERL start with a $ sign symbol
   - Declaring a variable in PERL: $var_name = value;
   - e.g:
     - $count = 1;
     - $stringVar = 'My Name is PERL';
3. **Comments in Perl**
   - Two types of comments -
     - Single Line
     - Multi Line
   - Single Line comment starts with the symbol #
   - Multi Line comment used to comment a chunk of code
     - =cut =head or =begin =end
     - Start with = sign
4. **for-foreach-Loop**
   - for Loop
     - for loop is used to execute a piece of code for certain number of times
   - for-each Loop
     - for-each loop is used to iterate a condition over an array
5. **while-do-while Loops**
   - while Loop
     - while loop executes a block of code while a condition is true.
   - do-while Loop
     - do-while loop will always execute the piece of code at-least once
     - It will then check the condition and repeat the loop while the condition is true
6. **Conditional Statements**
   - if Statement
     - if statement is used to execute piece of code only if a specified condition is satisfied.

- if-else Statement
  - if-else statement is used to execute piece of code if a condition is satisfied or another code if the condition is false.

7. **More Conditional Statements**
   - if-elsif-else statement
     - if-elsif-else conditional statement is used to check specific condition and if it is true execute the respective block else execute the default else block.
   - switch Statement
     - switch is conditional case statement. Satisfied case gets execute else the default case gets execute.
8. **Data Structures in Perl**
   - Scalar
     - These are the basic variables in PERL.
     - It can hold any kind of type viz. string, number etc.
     - eg: $variable = 9;
       $variable = 'This is string type of variable';
   - Array
     - Array in PERL is ordered collection of data.
     - It can hold data of any type.
     - Array index starts from zero.
     - eg: @array = (1, 5, 6, 'abc', 7);
   - Hash
     - Associative array or Hash in PERL is un-ordered collection of data.
     - It is a key value pair.
     - Key cannot be duplicate in hash whereas value can be.
     - eg:
       %hash = (
       'Name' => 'John',
       'Department' => 'Finance'
       );
9. **Arrays**
   - Getting Last index of array
   - Getting length of an array
     - To get the length, add 1 to last index of an array
     - Other way is use scalar function on array or assign array to a scalar variable.
   - Accessing element of an array
   - Looping over an array
     - There are two ways to loop over an array
       - Using for loop
       - Using for-each loop
10. **Array functions**
    - push
      - Add element at the end of an array
    - pop
      - Remove element from the end of an array
    - unshift
      - Add element at the start of an array
    - shift
      - Remove element of an array from the start.
    - split
      - This function splits the string and makes an array of it.
    - qw
      - qw stands for "Quoted word"
      - It returns a list of word separated by white spaces.
    - sort

- sorts the array in alphabetical order.

11. **Hash in Perl**
    - Accessing element of a hash
    - Basic hash functions
        - keys
            - Returns keys of a hash
        - values
            - Returns values of a hash
        - each
            - Retrieve the next key/value pair from a hash
    - Looping over a hash
12. **Functions in Perl**
    - Simple function
    - Function with parameters
    - Function which return single value
    - Function which returns multiple values
13. **Blocks in Perl**
    - Begin
        - This block executes at the compilation time once it is defined.
        - Anything which needs to be included before execution of the rest of the code is written here.
    - End
        - This block executes at the end.
        - Anything which needs to be executed at last is written here.
    - UNITCHECK blocks
    - CHECK blocks
    - INIT blocks

Intermediate level

Topics

1. **Access Modifiers in PERL**
    - private variable - my
        - scope is in the block inside where it is declared.
    - lexically scoped variables - local
        - that means they get the temporary value inside the block where it is used
    - global variables - our
        - can be accessed without giving package name while accessing it in another package.
2. **Referencing & Dereferencing in Perl**
    - Referencing
        - Create a reference by adding \ (backward slash)
        - Demo of various examples
        - Add, remove, access elements of array reference / hash reference in the script with examples.
    - De-referencing
        - Get the actual entity being referred by reference.
        - Demo of various examples
3. **Special Variables in PERL**
    - Special variables have a predefined and special meaning in Perl.
    - These variables are denoted by usual variable indicator such as $, @, % along with punctuation characters.
4. **File Handling**
    - Open a file
    - Open a File in Read Mode

- Open a File in Write Mode
- Open a File in Append Mode
- Close the FileHandle

5. **Exception and error handling in PERL**
   - When an error occurs, exception and error handling helps to recover the program.
   - Methods used in Perl:
     - warn()
     - die()
     - eval()
6. **Including files and/or modules in a PERL program**
   - We can include the Perl modules or files by using the following methods.
     - do: It includes the source code from other files into the current script file.
     - use: It includes Perl module files only. Files get included before the actual execution of the code.
     - require: It includes both Perl programs and modules.
7. **Sample Perl Programs**
   - Includes all major topics that we covered so far in this sample program.
   - This program will give the output of various weather forecast reports of a region.
   - Weather.pm is a module that has a complex data structure to hold the data required for this program.
   - weather_report.pl is the Perl program which makes use of this module file to give the required output
8. **PERL Module library(CPAN)**
   - Comprehensive Perl Archive Network (CPAN) is the library of modules.
   - User can make use of the existing modules available in CPAN
   - New modules created by the user can be uploaded to CPAN so that other Perl users can make use of it.
9. **Downloading CPAN module**
   - Linux OS:
     - There are several ways to download.
     - Type cpan and press Enter.
     - This gives us cpan prompt.
     - Type install module name.
   - Windows OS:
     - With installation of Perl on windows, a utility called PPM(Perl Package Module) gets installed.
     - Type ppm install module name.
10. **PERL & HTML**
    - To create HTML pages, Perl provides CGI module which creates CGI script with require HTML tags.
    - There are different methods which CGI modules provide to add header, adding fields to the page, retrieving the values of the parameters posted on to the form.

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Spoken Tutorial

php MySQL®

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PHP

Introduction

PHP or "PHP : Hypertext Preprocessor" is a widely-used Open Source general-purpose scripting language that is especially suited for Web development and can be embedded into HTML. Its syntax draws upon C, Java and PERL, and is easy to learn.

The main goal of the language is to allow web developers to write dynamically generated web pages quickly, but you can do much more with PHP.

Uses of PHP •

• To create large websites
• For E-commerce like osCommerce, OpenCart
• To create online discussion forums like phpBB
• To create content management systems like Drupal, Joomla
• To create e-learning management systems like Moodle
• To develop web-based management tools like phpMyAdmin
And many more..

MySQL

Introduction

MySQL is a relational database management system (RDBMS) that runs as a server providing multi-user access to a number of databases. The SQL phrase stands for Structured Query Language. Applications which use MySQL data bases include: Joomla, Word Press, MyBB, phpBB, Drupal and other software built on the LAMP software stack.

A third party open source software "phpMyAdmin" is used as a web-based front end for managing MySQL databases easily and effeciently. It is widely installed by Web hosts worldwide. Also it is included in the convenient LAMP, MAMP and WAMP software bundle installers.
MySQL is used in many high-profile, largescale World Wide Web products, including Wiki-pedia, Google and facebook.

Features of PHP & MySQL
• Scalability and flexibility
• High speed and high performance
• Data protection
• Comprehensive Application Development
• Management tools
And many more...

PHP & MySQL

Benefits

• A large chunk of facebook, the world's leading social networking site, has a huge code based in PHP and it uses MySQL as database to store information of 1 billion+users!

• PHP is the most preferred language for web development by free-lance developers across the globe.

• Many free and open source CMS like Drupal Moodie, etc. are created using PHP & MySQL.

• PHP & MySQL has a large user and develope community.

Links:

Original videos are available at
http://phpacademy.org

PHP Official Website -http://www.php.net

MYSQL Official Website -
http://www.mysql.com

W3Schools - PHP and MySQL Tutorials -
http://www.w3schools.com/php/default.asp
http://www.w3schools.com/sql/default.asp =

These tutorials will help you get started with PHP programming. In this series we will go through the basics of installing and getting PHP ready for development, the basic syntax and features of the language.

Online web tutorials for PHP & MySQL
Contents

PHP Basics: Level 1

Installing a Webserver with PHP and MySQL (XAMPP)

1. XAMPP in Windows
   - Installing XAMPP in Windows
   - XAMPP is a cumulative package consisting of Apache, PHP and MySQL Packages is available for Windows
   - In this tutorial the XAMPP will be installed and the default Webserver directory will be **"htdocs"**.
2. XAMPP in Linux
   - Installing XAMPP in Linux
   - XAMPP is a cumulative package consisting of Apache, PHP and MySQL Packages is available for Linux
   - In this tutorial the XAMPP will be installed and the default Webserver directory will be **"opt"**.

Echo PHP Function, PHP Variables, If and Switch Statements

3. Echo Function
   - The echo() function outputs one or more strings.
   - Syntax: echo(strings);
   - Ex. echo "Hello World!";
4. Variables in PHP
   - Variables are used for storing values, like text strings, numbers or arrays.
   - When a variable is declared, it can be used over and over again in your script.
   - All variables in PHP start with a $ sign symbol.
   - The correct way of declaring a variable in PHP: $var_name = value;
5. If Statement
   - if statement - use this statement to execute some code only if a specified condition is true.
   - if...else statement - use this statement to execute some code if a condition is true and another code if the condition is false.
   - if...elseif....else statement - use this statement to select one of several blocks of code to be executed.
6. Switch Statement
   - switch statement - use this statement to select one of many blocks of code to be executed

PHP Operators

7. Arithmatic Operators
   - Ex. +,-,*,/,%,++,--
8. Comparison Operators
   - Ex. ==,!=,<>,>,<,>=,<=
9. Logical Operators
   - Ex. && (AND),|| (OR),! (NOT)

Arrays in PHP

10. Arrays

- An array stores multiple values in one single variable.
- Numeric array - An array with a numeric index.
- Associative array - An array where each ID key is associated with a value.
- Ex. Numeric Array: $fruits=array("Apple","Mango","Banana","Grapes");

11. Multi-Dimensional Arrays
    - In a multidimensional array, each element in the main array can also be an array. And each element in the sub-array can be an array, and so on.

Loops in PHP

- Loops execute a block of code a specified number of times, or while a specified condition is true.

12. Loops - While Statement
    - The while loop executes a block of code while a condition is true.

```
while (condition)
{
code to be executed;
}
```

13. Loops - Do-While Statement
    - The do...while statement will always execute the block of code once, it will then check the condition, and repeat the loop while the condition is true.

```
do
{
code to be executed;
}while (condition);
```

14. Loops - For Statement
    - The for loop is used when you know in advance how many times the script should run.
    - Syntax:

```
for (init; condition; increment)
{
code to be executed;
}
```

15. Loops - Foreach Statement
    - The foreach loop is used to loop through arrays.

```
foreach ($array as $value)
{
code to be executed;
}
```

16.

17. **Functions in PHP**

18. Functions (Basic)
    - To keep the script from being executed when the page loads, you can put it into a function.
    - A function will be executed by a call to the function.
    - You may call a function from anywhere within a page.
    - Syntax:

```
function functionName()
{
code to be executed;
}
```

19. Functions (Advanced)
    - We can also pass parameters to functions during both the declaration and calling time.
    - function functionName($param1,$param2); //during function call.
    - function functionName($param1,$param2)

{
code to be executed
}

20.

21. **PHP Special Variables**
    22. GET Variable
        - The built-in $_GET function is used to collect values from a form sent with method="get".
        - Information sent from a form with the GET method is visible to everyone (it will be displayed in the browser's address bar)
        - It has limits on the amount of information to send.
    23. POST Variable
        - The built-in $_POST function is used to collect values from a form sent with method="post".
        - Information sent from a form with the POST method is invisible to others and has no limits on the amount of information to send.

PHP and HTML

24. Embedding PHP
    - We can embed our PHP code anywhere in the webpage, by enclosing our script within the <?php..... //SCRIPT.....?>
25. Common Way to Display HTML
    - We can also use the HTML Code within the PHP Script. Almost each of the HTML Tags can be used within a PHP Script.

Common Errors

- The PHP Engine in the webserver also displays the user the error in case there is something wrong in the code along with the tentative line number where the fault may have occurred. Thus, in this way we can eradicate errors.

26. Common Errors (Part 1)
    - Learn how to spot errors and how to fix them
    - Common Parse errors
    - Parse errors due to missing comma or semicolon
    - Parse errors due to not ending single or double quotes correctly
27. Common Errors (Part 2)
    - Parse error due to missing or extra brackets
    - Matching brackets during complex mathematical operations
    - Purpose and usefulness of correct indentation
    - Errors due to missing or extra characters
    - Undefined variable and undefined index errors
28. Common Errors (Part 3)
    - "Cannot modify header information - headers already sent by..." errors when using header() function
    - Using ob_start() to turn on output buffering
    - "Failed to open stream; no such file or directory in..." errors when including a invalid file
    - Using a @ symbol to suppress errors

MYSQL Tutorials: Level 2

MySQL is a Relational Database Management System (RDBMS) that runs as a server providing multiuser access to a number of databases. A third party open source software "phpMyAdmin" will be used as a web-based front end for managing MySQL databases easily and efficiently. It is widely installed by Web

hosts worldwide, since it is developed in PHP and is included in the convenient LAMP stack, MAMP, and WAMP software bundle installers.

1. MySQL (Part 1)
   - An Introduction to the PHPMyAdmin Interface.
   - Creating a New Database
   - Creating a new Table and entering the value of the field with the requisite datatype.
   - SQL Query displayed in the PHPMyAdmin window.
2. MySQL (Part 2)
   - Connecting to the database and inserting dummy data into the database.
   - mysql_connect("server_addr", "username", "password") - Connect to the Database Server with the authorised user and password.
   - mysql_select_db("database_name") - Selecting a database within a connected database server.
3. MySQL (Part 3)
   - Writing some data into the database (INSERT and UPDATE Queries).
   - mysql_query('TYPE_HERE_YOUR_MYSQL_QUERY') - This function is used to run specific queries on our database.
   - INSERT QUERY - INSERT into *table* values ('att1', 'att2' , 'att3', 'att4' ,'att5') //Inserts Data into the table
   - UPDATE QUERY - UPDATE *table_name* SET att1='xyz' //Updates the Existing values stored in the table of the database.
4. MySQL (Part 4)
   - Getting data from the database table and displaying it.
   - SELECT QUERY - SELECT * FROM table_name WHERE att1='abc' // Query returns the value from the database where att1 = abc
   - mysql_num_rows() - Gives us the number of rows there are in the query we have just given out.
   - ORDER BY - Helps to order the output result as when selecting the values form the database. {Use of DESC for Descending ordering / ASC for Ascending ordering}
5. MySQL (Part 5)
   - mysql_fetch_assoc — Fetch a result row as an associative array.
   - array mysql_fetch_assoc (resource $result) //Returns an associative array that corresponds to the fetched row and moves the internal data pointer ahead. mysql_fetch_assoc() is equivalent to calling mysql_fetch_array() with MYSQL_ASSOC for the optional second parameter. It only returns an associative array.
6. MySQL (Part 6)
   - Getting data from the database with the help of an HTML form.
   - Creating a FORM where a user can specify a name and selecting the appropriate value from the database.
7. MySQL (Part 7)
   - Changing the existing values of the databse table using HTML Forms.
   - Update unique records using the id than individual values.
8. MySQL (Part 8)
   - DELETE QUERY - To Delete the specific or all the entries of the Database.
   - DELETE FROM table_name WHERE field='xyz' // Deletes the entry from the database where the field = xyz.

PHP Advanced: Level 3

1. Name Splitter(Part 1)
   - We Input a fullname into a form and then splitting it into firstname and lastname
   - Use of : strlen(string) - This function counts total no of characters, including numbers and white spaces in the string
   - Use of: mb_substr(string,starting_position,no_of_characters) - This function takes a specific character from a string and a range of no of characters preceeding it.

2. Name Splitter(Part 2)
   - Divided the string into 2 halves through searching space, first half is stored as firstname and second half as lastname.
   - Use of : substn(string,starting_position,length) - This function results a substring starting from specified position to no of characters required.
3. PHP Dynamic Pages (Part 1)
   - We learn to create website with standard template and when on clicking the link changes only the content of page ,new page is not loaded.
   - Use of : include(variable) - This function is used to brought up all the content of variable page onto the current page.So that by changing the variable content of the website can be altered without reloading a similar page content everytime.
4. PHP Dynamic Pages (Part 2)
   - Making the dynamic linking user-friendly in case an error is obtained by include() function, i.e. checking if the file connected exists or not.
   - Use of : file_exists(variable) ->This function is results boolean value true(1) if the file exists and false(0) if not.
5. Simple Visitor Counter
   - Counts how many users have viewed your page as per count of refresh button clicked
   - fopen("file_name","parameter") opens a file (Creates it if not exists).parameter assigns the mode, w for writting mode, a for append mode
   - file_get_contents("file_name")- This function is used to obtain content from the file.
   - fwrite("file_name",variable) - This function writes into the file value present in variable.
6. Unique Visitor Counter (Part 1)
   - Counts how many users visiting based on their IP addresses. It obtains IP addresses stored in ip-file to match with user's IP
   - count() - This function is used to count no of lines in the file.
   - $_SERVER[] - *This is an array containing information such as headers, paths and script locations.*
   - $_SERVER['REMOTE_ADDR'] - It informs about the IP address from which the user is viewing the current page.
7. Unique Visitor Counter (Part 2)
   - Retrieves IP addresses stored and compares them with IP of user viewing the current page.
   - fopen("file_name","parameter") opens a file (Creates it if not exists).parameter assigns the mode, w for writing mode, a for append mode
   - fwrite("file_name",variable) - This function writes into the file value present in variable.
   - intval(string) -This function converts an string value into a integer value.
8. Unique Visitor Counter (Part 3)
   - In this video errors have been corrected. Here counter keeps on increases
9. PHP String Functions (Part 1)
   - strlen(string) - This function counts total no of characters, including numbers and white spaces in the string
   - mb_substr(string,starting_position,no_of_characters) - This function takes a specific character from a string and a range of no of characters preceeding it.
   - explode("delimiter",string) -This function breaks down the string into a array. Delimiter is used to know from where to break string.
   - implode(string,"delimiter") -This function joins the array into a string. Delimiter is used to know how to join array elements.
   - nl2br() -This function prints the content in exactly same form as written. Used in case for breaking lines.
10. PHP String Functions (Part 2)
    - strrev(string) -This function is used to reverse the inputed string
    - strtolower(string) -This function is used to convert all alphabatic characters in string to thier small/lower case form.
    - strtoupper(string) -This function is used to convert all alphabatic characters in string to thier capital/upper case form.

- substr_count(string,sub_string,) -This counts the no of substrings matching the particular value in string. It retuns an integer value.
- substr_replace(original_string,string_to_replace) -This function replaces the cuntent of substring into original string.

11. Basic PHP Proxy
    - Providing the proxy to our page of a url.
    - foreach() - this loop looks through a block of code for each element in an array.
    - erag_replace(current_content, altered content,page) - This function is used to manipulate content of a proxy page.
12. Basic Advert Rotation (Part 1)
13. Basic Advert Rotation (Part 2)
14. Find and Replace
15. Date and Time (Part 1)
16. Date and Time (Part 2)
17. Creating Images with PHP
18. File Upload (Part 1)
    - Setup html form for file uploading
    - Upload file and get file related information like file name, file size, etc
    - Check for error messages after uploading file
19. File Upload (Part 2)
    - Move file from temporary area to user specified location
    - Restrict uploading to only specific file type
    - Restrict uploading to a maximum file size
20. Cookies (Part 1)
    - What are cookies
    - Set cookies using setcookie function
    - Understaing how to set expiry time of cookies
    - Read and print values from existing cookies
    - Print every cookie that we have stored
21. Cookies (Part 2)
    - Check if a cookie exists or not using isset
    - Unset a cookie when no longer required
    - Change the value of a existing cookie
22. Sessions
    - A PHP session variable is used to store information about, or change settings for a user session.
    - Session variables hold information about one single user, and are available to all pages in one application.
    - session_start() - Starting a PHP Session
    - $_SESSION['variable_name']=value - Stores the value in the Session variable.
    - session_stop() - Stopping a PHP Session
23. Search Engine Crawler Detection
24. Swear Word Filter (Part 1)
25. Swear Word Filter (Part 2)
26. Rename Function
27. SQL Injection (Part 1)
28. SQL Injection (Part 2)
29. MD5 Encryption
    - Calculates the MD5 hash of str using the RSA Data Security, Inc.'s MD5 Message-Digest Algorithm, and returns that hash (Its a one way encrypting technique).
    - Syntax : string md5 (string $str [, bool $raw_output = false])
    - Used in encrypting passwords and storing them in a database.
30. Sending Email (Part 1)
    - Create HTML form for getting email subject and message from the user
    - Using the mail() function to send email

31. Sending Email (Part 2)
    - Validating whether the name and message have been entered by the user
    - Check the length of the string using the strlen() function.
    - Set up the to, subject and message field of the mail() function
    - Send email and check for any errors
32. Sending Email (Part 3)
    - Fix the "Sendmail from not set in php dot ini" error
    - Create the mail "From:" header
    - Using a local or external mail server to send email
    - Using the ini_set() and ini_get() functions to set and read internal php configuration options respectively
33. Upload an Avatar Profile Image (Part 1)
34. Upload an Avatar Profile Image (Part 2)
35. Upload an Avatar Profile Image (Part 3)
36. Upload an Avatar Profile Image (Part 4)
37. Form Validation(Part 1)
38. Form Validation(Part 2)
39. Admin Only Pages (Part 1)
40. Admin Only Pages (Part 2)
41. Admin Only Pages (Part 3)
42. Create a news Feature (Part 1)
43. Create a news Feature (Part 2)
44. Create a news Feature (Part 3)
45. Display Images from a Directory
    - Using opendir() to open a directory handle
    - Using readdir() to read a directory that is already opened
    - Printing the directory listing
46. Pagination (Part 1)
47. Pagination (Part 2)
48. Language Chooser
49. PHP/ MYSQL Based Project - Basic Register and Login Module

    1. **User Login**
        1. User Login Part 1
            - Collecting information from user in a form & connecting to authorized database.
            - mysql_connect("hostname", "username", "password") - Connect to the Database Server with the authorized user and password.
            - mysql_select_db("database_name") - This selects a database within a connected database server
        2. User Login Part 2
            - retrieves information about inputed username and checks whether given password matches with the password in database.
            - mysql_query('TYPE_HERE_YOUR_MYSQL_QUERY') - It is used to run specific queries on our database.Here it collects information from field username from specified table.
            - mysql_num_rows('query') - This function is user to counts no of rows retrieved from the query given to the database.
            - mysql_fetch_assoc('query')- This function fetches required information from the database in the form of array.
        3. User Login Part 3
            - Creating session for holding value and destroying that value by destroying session.
            - start_session() - Starts session to hold information from one pages to other until the session exists.

- $_SESSION['variable_name']=value - Stores the value in the session variable.
- session_destroy() - destroys the value present in session variable.

2. **User Password Change**
    1. User Password Change Part 1
        - We learn to obtain old existing password and new password from the user.
        - start_session() - Hold information from previous pages to session page.
        - $variable_name=$_SESSION['value'] - to retrieve value containing in PHP variable.
    2. User Password Change Part 2
        - Checking whether encrypted old password matches with the database password and new password is same as confirm password.
        - md5("parameter")- encrypts parameter into irreversible logical code.
        - mysql_connect("hostname", "username", "password") - Connect to the Database Server with the authorized user and password.
        - mysql_select_db("database_name") - This selects a database within a connected database server
        - mysql_query('TYPE_HERE_YOUR_MYSQL_QUERY') - It is used to run specific queries on our database.Here it retrieves password of user logged in.
    3. User Password Change Part 3
        - updating the new password in database.
        - mysql_query('TYPE_HERE_YOUR_MYSQL_QUERY') - It is used to run specific queries on our database. Here it updates new password into database.
3. **User Registration**
    1. User Registration Part 1
        - Creating a form which allows user to input values in page
    2. User Registration Part 2
        - Striping tags of inputed strings and converting password into md5 encryption.
        - Use of : strip_tags(strigs) - cuts down unnecessary spaces,html tags and queries from string.
    3. User Registration Part 3
        - Checking whether the username and password provided meet the required length sizes.
        - Use of : strlen("string") - counts th character length of the string.
    4. User Registration Part 4
        - Inserting inputed information from the user into the database table through query.
        - mysql_connect("hostname", "username", "password") - Connect to the Database Server with the authorized user and password.
        - mysql_select_db("database_name") - This selects a database within a connected database server
        - mysql_query('TYPE_HERE_YOUR_MYSQL_QUERY') - It is used to run specific queries on our database. Here it inserts different fields into the database table.
    5. User Registration Part 5
        - Converting the password inputed from user to md5 encrypt form.
        - md5("parameter")- encrypts parameter into irreversible logical code.
    6. User Registration Part 6
        - Checking the username provided so that condition for duplicate username can be avoided.
        - mysql_query('TYPE_HERE_YOUR_MYSQL_QUERY') - This is used to run specific queries on our database. Here it checks if username already exists in database.

- mysql_num_rows('query') - This function is used to counts no of rows retieved from the query.
- strtolower(string) - converts all characters of string into lower case.

python™

What is Python?

Python is a general purpose, high level, remarkably powerful dynamic programming language used in a wide variety of application domains.

Why Python?

- Easy to read and learn
- Free and Open Source
- Useful for scientific computing
- Powerful interactive interpreter
- Extensive scientific libraries
- Well documented

Where can you use Python?

- Numeric and Symbolic computation
- 2D/3D Plotting
- User interfaces
- Parallel computing
- Machine Learning and Image Processing
- Game development
- Web development
- Much more...

Who uses Python?

- Google
- Yahoo
- Walt Disney
- NASA
- IBM
- YouTube
- nVIDIA
- Software - Blender, Motion Builder, Cinema 4D, etc.
- Games - Battle field 2 by EA sports, Crystal space 3D, etc.

Python is one of the most popular programming languages today, and therefore has been included in the CBSE curriculum. It easily performs tasks that proprietary tools like Matlab and Mathematica offer. Today leading companies are using Python extensively, hence there are better job opportunities. Learn Python, and grab the Opportunity!

matplotlib django pandas SciPy

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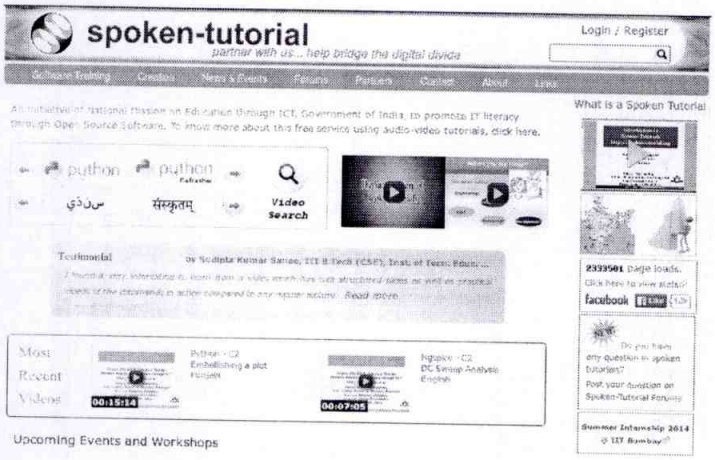
- **Spoken Tutorial -** The FOSSEE project has created a series of Spoken Tutorials on Python. Theses are available for learning, on the Spoken Tutorial website, free of cost. You can access these tutorials from this link

  python.fossee.in/spoken-tutorials



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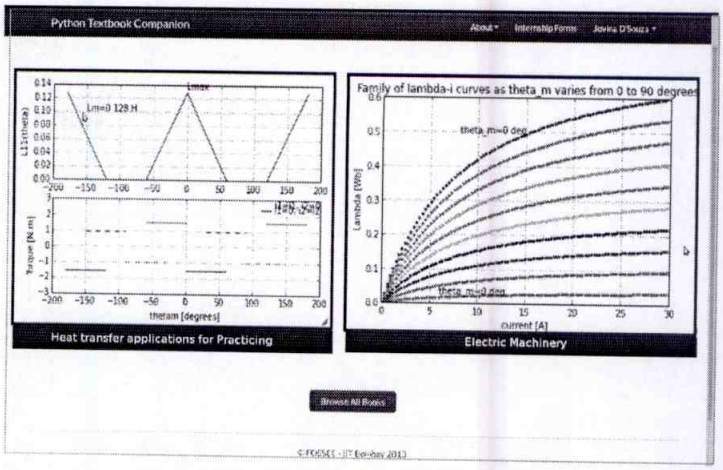

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Online web tutorials for Python 3.4.3
Contents

Note: Each numbered topic corresponds to a single spoken tutorial. Each bulleted point corresponds to a command or topic that must be covered in the given spoken tutorial.

Module 1: Basic Plotting

Getting started with ipython

1. Use Python 3.5.2
2. Use Ipython version 5.1.0
3. IPython is an enhanced interactive Python interpreter.
4. Invoke the IPython interpreter
5. Quit the IPython interpreter
6. Navigate the IPython session history
7. Use tab-completion to work faster.
8. See the documentation of functions using question mark.
9. Interrupt commands using Ctrl + C when we make an error.
10. round command

Using the plot command interactively

1. Use Python 3.4.3
2. Use Ipython version 5.1.0
3. Start IPython with pylab.
4. ImportError if matplotlib is not installed
5. clf() function
6. Use the linspace function to create equally spaced points in a region.
7. Find the length of sequences using len function.
8. Plot mathematical functions using plot.
9. Clear drawing area using clf.
10. Usage of buttons in the UI of the plot window such as - save, zoom, move axis, back and forward and Home

Embellishing a plot

1. Use Python 3.4.3
2. Use Ipython version 5.1.0
3. Modify the attributes of a plot
4. Pass additional keyword arguments to plot command
5. Add title to a plot using 'title' command.
6. Incorporate LaTeX style formatting by adding a $ sign before and after the string.
7. Label x and y axes using xlabel() and ylabel() commands.
8. Add annotations to a plot using annotate() command.
9. Get the limits of axes using xlim() and ylim() commands.
10. Set the limits of axes using xlim() and ylim() commands.

Saving plots

1. Use Python 3.4.3
2. Use Ipython version 5.1.0
3. Save plots using the savefig() function.
4. Save the plots in different formats like
   - pdf
   - ps
   - png
   - svg
   - eps

Multiple plots

1. Use Python 3.4.3

2. Use IPython 5.1.0
3. Draw multiple plots which are overlaid.
4. Operations on individual plots.
5. Use the figure command.
6. Distinguish between multiple overlaid plots.
7. Use the legend command.
8. Serial number of the plot to select corresponding plot.
9. Switch between the plots
10. Saving individual plots.

Subplots

1. Use Python 3.4.3
2. Use IPython 5.1.0
3. Creating subplots
4. Switching between subplots.
5. Subplot command
6. Passing arguments to subplot command.
7. First argument is the number of rows of subplots.
8. Second argument is the number of columns of subplots
9. Third argument specifies the serial number for subplot.

Additional features of IPython

1. Use Python 3.4.3
2. Use IPython 5.1.0
3. Retrieve the history using %history command.
4. View only a part of history by passing argument to %history command.
5. Pass arguments to %history to get particular lines of code
6. Save the required lines of code in required order using '%save' command.
7. Use '%run -i' command to run a saved script.

Module 2: Plotting Experimental Data

loading data from files

1. load data from file
2. single column
3. multiple columns separated by delimiter
4. cat command
5. loadtxt()
6. columns separated by spaces
7. columns separated by semi-colon
8. unpack argument
9. delimiter argument
10. three columns of data

Plotting the data

1. plotting data
2. list
3. list element-wise squaring
4. plot data points
5. clear plots
6. errorbar function

7. dots or filled circles in plot
8. plot with red pluses
9. explore documentation in ipython
10. plot with errorbars
11. using format argument

Other types of plots

1. scatter plot
2. scatter function
3. scatter plot with various arguments
4. logarithmic plot
5. loglog function
6. cat command
7. loadtxt function
8. unpack parameter of loadtxt
9. linspace
10. scatter versus plot

Plotting charts

1. Use Python 3.4.3
2. Use IPython 5.1.0
3. To produce scatter plot
4. Plot a pie chart using pie() function
5. Plot a bar chart using bar() function
6. Access the matplotlib online help
7. Charts with line hatching

Module 4: Handling Large Data Files

Getting started with lists

1. What is a list?
   - Define List
   - List index
2. Create:
   - List with elements
   - Empty list
   - List within a list
3. Find out the list length using len function
   - Access elements using their index numbers
   - Append elements to list using the function append
   - Delete element from list using the del and remove function

Getting started with for

1. For loop syntax
2. Example to use For loop
3. Indentation in for loop
4. Create blocks in python using for
5. Iterate over a list using for loop
6. How to get out of the block
7. use of Range() function
8. Range function in for loop

9. How to use Python interpreter
10. IPython interpreter to specify blocks

Getting started with strings

1. What are strings?
2. How are strings denoted in Python?
3. String concatenation
4. Multiply a string with an integer
5. Accessing individual elements of a string
6. Accessing elements of a string using negative indices
7. Split() function
8. Join() function
9. Define a string in different ways
10. Print a string repeatedly

Getting started with files

1. Open a file
2. Open() function
3. Different Modes of opening a file
4. Read() method
5. Read the content of the file line by line
6. Read the entire content of the file
7. Append the lines of a file to a list
8. Close a file
9. Demonstration using a txt file
10. Splitlines() method

Parsing data

1. What is Parsing data?
2. split function and its syntax
3. What is string tokenizing?
4. How to split a string on whitespace?
5. split function with argument
6. strip function and example
7. Converting string into floats and integers
8. Example to read a huge .txt file line by line and parse each record
9. Perform computations on the .txt file
10. Execute the file using %run command

Statistics

1. Statistical operations in Python
2. Installation of Numpy for mathematical and logical operations
3. Installation of pip to install python libraries
4. loadtxt() function with example
5. Getting the shape of an array
6. Getting the sum of a column in an array
7. How to calculate mean?
8. Calculate mean across each of the axis of the array
9. How to calculate median?
10. How to calculate standard deviation?

Module 5: Arrays and Matrices

Getting started with arrays

1. Overview of array
2. Usage of numpy library
3. How to create arrays
4. How to create two dimensional array
5. arange() method
6. reshape() method
7. How to find the shape of an array?
8. Create a new array with elements of different datatypes
9. Identity matrix
10. Zeros method

Accessing parts of arrays

1. Create a one-dimensional array
2. Create a two-dimensional array
3. Accessing individual elements of an array
4. How to change the value of an array
5. How to change more than one elements at a time
6. Negative indexing of arrays
7. Slicing of an array
8. Striding of an array
9. Access only the odd rows and columns of an array
10. Examples to demonstrate all the manipulations of arrays

Image manipulation using Arrays

1. Read images into arrays
2. How to access parts of an array?
3. imread command
4. imshow command
5. show command
6. How to check the dimensions of an array?
7. Example to access parts of an image
8. How to stride over an array?
9. Example to access an RGB image
10. Slice an image of different dimension

Basic Matrix Operations

1. Create matrices from lists
2. asmatrix method
3. arange and reshape methods
4. Basic matrix operation
5. Addition, subtraction and multiplication of a matrix
6. Determinant of a matrix
7. eye(), allclose() functions
8. Inverse of a matrix
9. eigenvalues and eigenvectors of a matrix
10. diag() function

Advanced Matrix Operations

1. flatten() function
2. Example to convert a multidimensional matrix to single dimension matrix
3. Frobenius norm of a matrix
4. Demonstration of Frobenius norm of a matrix
5. Inverse of a matrix
6. Infinity norm of a matrix
7. norm documentation
8. Singular value decomposition
9. svd() function
10. smat function

Least square fit

1. Generating a Least Square fit line
2. Generating L vs t square
3. loadtxt function
4. Usage of numpy library
5. Plotting L vs t square
6. Steps for least square fit line
7. Matrix formulation tsq=A.p
8. Generating the two matrices tsq and A
9. Finding transpose of a matrix
10. lstsq() function

Module 6: Python Language: Basics

Basic datatypes & operators

1. Data types in Python
2. Demonstration of int, float and complex data types with examples
3. Different functions associated with int data type
4. Complex numbers and their functions
5. Boolean operations with examples
6. Operator precedence with parentheses
7. Different operators available in Python3
8. Modulo operator with examples
9. How to do exponent operation in Python?
10. How to find the square root of a number in Python?

Sequence datatypes

1. List, string and tuple sequence data types with examples
2. How to access a list using index numbers?
3. Access the string elements
4. Access the tuple elements
5. How to add different sequence data types?
6. How to find the length of a variable?
7. Find the sum of a list
8. Convert list to tuple
9. Convert tuple to list
10. Convert string to list and list to string

Input/output

1. Input Output in Python
2. Various output statements
3. Print a string
4. Print a string with newline character
5. How to use format operators?
6. Example for integer format
7. Example for string format
8. Example for float format
9. Getting input from the user using Input()function
10. Display a prompt to get the input
11. Save the script as filename.py and execute using %run command

Conditionals Statements

1. if condition statement
2. Demonstration of if statement with example
3. if/else condition statement with example
4. Importance of indentation in a program
5. Usage of colon in program
6. Condition statement using elif
7. Examples using if/elif/else block
8. Ternary conditional statement
9. Difference between if/else and ternary conditional statements
10. How to use pass statement?

Loops

1. Explanation of while loop
2. Demonstration of while loop with example
3. Print the squares of all the even numbers below 10 using while loop
4. How to use for loop?
5. Print the squares of all the even numbers below 10 using for loop
6. for loop with range function
7. How to use break statement in for loop
8. pass statement in for loop
9. continue statement in for loop
10. Demonstration of pass, break and continue statements

Module 7: Python Language: Datastructures

Manipulating lists

1. Various manipulation in lists
2. Slicing of lists
3. Syntax and demonstration of slicing of lists
4. How to use step value in slicing
5. Striding of list
6. Examples with various parameters in striding of list
7. sort method in list
8. Usage of sorted() built-in function
9. Reverse a list
10. Striding with negative values

11. How to store a new reversed list in another variable

Manipulating strings

1. How to slice a string
2. Various way to get substrings using index
3. Reverse a string
4. How to check if a given string is a palindrome or not
5. Replace characters in a string
6. Convert a string to uppercase
7. Convert a string to lowercase
8. How to use for loop in a list
9. Join method
10. Join list elements to form a string

Getting started with tuples

1. What are tuples?
2. How to declare tuples?
3. Examples to declare tuples
4. Demonstration of creating tuple
5. Accessing tuples by their index positions
6. Iteration over tuples
7. Demonstration of immutability property of tuples
8. How to swap values in tuples
9. Similarities of tuples with lists
10. Tuple packing and unpacking

Dictionaries

1. Overview of dictionaries
2. Creating an empty dictionary
3. Creating a non empty dictionary
4. About key:value pair
5. How to access the dictionary elements
6. Demonstration of wrong key
7. Add, delete and modify an item in a dictionary
8. Usage of method in
9. Retrieve the keys and values by using the methods keys() and values()
10. Iterate over elements of a dictionary using a for loop

Sets in Python

1. What are sets in python?
2. Input sets
3. Create sets
4. How to create empty sets?
5. Operations on sets
6. Add and remove methods
7. Union and intersection methods
8. Difference and symmetric_difference methods
9. Subset and superset
10. Length and containership on sets

Module 8: Python Language: Advanced

Getting started with functions

1. About Functions
2. How to define a function
3. Example for defining a function
4. Calling a function with arguments
5. Calling a function without arguments
6. Return values from a function
7. Indentation in coding
8. Documenting or commenting code
9. How to use docstrings in python function
10. How to write a function circle to return area and perimeter with radius r

Advanced features of functions

1. Functions with default arguments
2. Various examples for default arguments
3. Interchanging the default and non-default arguments
4. Call a function with keyword arguments
5. Call a function without keyword arguments
6. Functions with positional arguments
7. Functions with arbitrary arguments
8. Demonstration of arbitrary arguments
9. Usage of * and ** in defining a function
10. Python built-in-functions

Using python modules

1. Python modules
2. Run a Python script from command line
3. How to import modules in python scripts?
4. How to import required functions from a module?
5. Usage of namespace
6. Advantages of using import functions
7. Using alias to the module
8. Demonstration of import functions
9. Run python scripts in ipython interpreter
10. Python standard library of modules

Writing python scripts

1. About Python modules
2. What is importing?
3. How to write a function and save it as a script
4. Run a python script
5. Import a module
6. Example to import a module
7. usage of __name__ variable
8. Write test condition using the name variable
9. How importing works in new IPython console
10. Different ways of running the Python script

Testing and debugging

1. What is software testing?

2. Write a simple function
3. How to write test cases?
4. Create simple tests for a function
5. Run the script and test the code
6. Automate tests
7. Example for test case fail
8. Coding style
9. How to give meaningful names in coding
10. Python coding standards

Handling Errors and Exceptions

1. Errors in Python
2. Syntax errors and exception
3. Exceptions with example
4. Syntax error with example
5. Demonstration of ValueError exception
6. Demonstration of ZeroDivisionError exception
7. try except clause in Python
8. What is debugging?
9. Using %debug for debugging in ipython
10. try except with else clause

The Spoken Tutorial project

- Self explanatory - uses simple language
- Audio-video - uses multisensory approach
- Small duration - has better retention
- Learner-centered - learn at your own pace
- Learning by doing - learn and practice simultaneously
- Empowerment - learn a new FOSS

Target Group

- Students - High School and College
- Working professional - Software users, developers and trainers
- Research scholars
- Community at large

Workshops

The Spoken Tutorial Projects Team conducts workshops on Scilab and other FOSS using Spoken tutorials and gives certificates to those who pass an online test.

For more details,please write to
contact@spoken-tutorial.org

Scilab is a major component of the FOSSEE (Free and Open Source Software for Science and Engineering Education) project, funded by the National Mission on Education through Information and Communication Technology, launched by the Ministry of Human Resource Development, Government of India

For Announcements:
http://scilab.in/cgi-bin/mailman/listinfo/announce

For Discussions:
http://scilabin/cgi-bin/mailman/listinfo/discuss

For more information contact us at:
contact@scilab.in

IIT Bombay

Scilab

Scilab is a cross-platform, free (free of cost and free to distribute and modify) and open source numerical computational package.
http://scilab.in
http://scilab.org
http://fossee.in

National Mission on Education through Information and Communication Technology (NMEICT)
www.sakshat.ac.in

Funded by MHRD, Goverment of India

http://spoken-tutorial.org

cilab is a cross-platform, free and open source umerical computational package and an easy-to-se, interpreted, high-level, matrix based rogramming language with a versatile inbuilt ıathematical library.

: can be used for

Graphing and data visualization
Control
Signal and Image processing
Statistical analysis
Fluid dynamics
Linear algebra
Numerical optimization
Modeling and simulation of dynamical systems

:s capabilities can be extended through the use of :adily available or custom made toolboxes where ıe extensions can be written in ubiquitous lower :vel languages like Fortran and C.

:cos Xcos is a graphical dynamical system

ıodeler and simulator. With this, the user can reate block diagrams to model and simulate the ynamics of sophisticated dynamical systems and ompile such models into executable code. Xcos is sed for signal processing, systems control, ueuing systems, and to study physical and iological systems. It can be used to model and imulate mechanical systems, hydraulic systems, lectrical systems, chemical systems, biological ystems and many more.

ab Migration Project

s your lab still paying hefty amounts for ıathematical tools which can be replaced by a ifty, free-of-cost software called Scilab? Then we uggest its the time to switch to the world of free nowledge and also to grace your annual balance-ıeets significantly.

lease get in touch with us at
ontact@scilab.in and we will help you.

Please allow us to assist your lab in shifting to Scilab.
http://scilab.in/lab_migration/proposal
For more information please visit
http://scilab.in/Lab_Migration_Project

The Textbook Companion Project

The Textbook Companion Project aims to port worked out examples (and optionally, select exercise problems) from standard textbooks using an open source software system, such as Scilab. In the following writeup, the word Scilab can be replaced by any other open source software as well. Any "standard" text-book can be used for this purpose. It will be referred to simply as textbook.

What is the objective of this exercise?

* To make it easy for the users of the textbook to start using Scilab
* To improve the documentation available for Scilab

For more details please visit
http://scilab.in/Textbook Companion Project

Hardware Project

SBHS: Single Board Heater System (SBHS) is a lab-in-a box setup which is primarily used for teaching/ studying the theory of control systems. The setup has been designed to cater the needs of undergraduate and postgraduate control courses. You can perform various control experiments on it - from tests as simple as Step Tests to complicated closed loop tests! This setup is also available for remote access under Virtual labs project
http://vlabs.iitb.ac.in/sbhs/index.php
http://fossee.in/moodle/

Data Acquisition System: Project aims to setup virtual labs based on standard DAQ cards available. (eg PCI) 1711 Advantech DAQ card). Open source drivers ,tools and libraries are available from COMEDI (linux controland measurement device interface). HART toolbox provides interface between comedi and scilab to access ADC and DAC

http://comedi.org/
http://hart.sourceforge.net/doc.html

Workshops

We propose to organise Level-0 Scilab workshops using spoken tutorials of ten minutes each. We believe that the extent of learning possible in the above mentioned scheme would be better than a usual workshop of much longer time duration.Possibly, the scheme proposed here could be considered as equivalent to a one week typical workshop. Hence it may be possible to give a certificate to this effect. For more details please visit: http://scilab.in/wiki/index.php/Workshops GNU Radio GNURadio is an open source Software Defined Radio (SDR) that was designed to convert all hardware problems into software problems. GNURadio package is provided with a complete HDTV transmitter and re-ceiver, a spectrum analyzer, an oscillo-scope, a multichannel receiver and a wide collection of modulators and demodulators. Its applications are primarily written using the Python programming language, while the supplied, performance-criticalsignal processing path is implemented in C++ using processor floating point extensions where available. For more details please visit http://spoken-tutorial.org/script/index.php/GNURadio

The Links Project Links Project provides a mechanism to list all the available scilab documents and to rank them. This project allows community participation for both listing and ranking. For more information, please visit http://scilab.in/links

Online web tutorials for Scilab
Contents

Note: Each numbered topic corresponds to a single spoken tutorial. Each bulleted point corresponds to a command or topic that must be covered organic nuts in the given spoken tutorial.

General Information

This topic will include all functionality in Scilab that iphone photography is not domain specific- functionality that is required across several domains.

Basic Level Introduction to Scilab

This level will include a set of tutorials that are required to be known in order to qualify as "Scilab Literate". The tutorials here will teach programming weight loss pills fundamentals and the most commonly used Scilab functionality- Matrix operations and Plotting.

1. **Installing**
   - Show where to download from and how to decide which version to choose
   - Windows installation
   - Linux installation (using package manager- show only Debian/Ubuntu as example (sudo apt-get install scilab) as well as generic binary)
   - Mac
   - Compilation from source can come as a part of a more advanced tutorial
2. **Getting Started**
   - Expressions: Show mathematical expressions with numbers
   - Variables
   - Diary command
   - Define symbolic constants.
   - Basic functions
   - suppressing output(;)
   - help,clc
3. **Vector Operations**
   - Define vector
   - Calculate length of a vector.
   - Perform mathematical operations on Vectors such as addition,subtraction and multiplication.
   - Define a matrix.
   - Calculate size of a matrix.
   - Perform mathematical operations on Matrices such as addition, subtraction and multiplication.
4. **Matrix Operations**
   - Access the elements of Matrix
   - Determine the determinant, inverse and eigen values of a matrix.
   - Define special matrices.
   - Perform elementary row operations.
   - Solve the system of linear equations.
5. **Conditional Branching**
   - 'if' and 'then' with the example
   - use of the 'else' keyword
   - use of the 'elseif' keyword
   - example for select
6. **Iteration**

- Explain syntax of 'for' statement- tell that the variable iterates over a list/vector/matrix (or an expression that evaluates to any of these).
- Give example: for i = 1:5, disp (i), end
- Then explain break condition. Use example: for i = 1:10, disp(i), if (i==5), break, end, end
- Then explain continue condition. Use example: for i = 1:10, if (i<=5) then continue, else disp(i), end, end
- Explain while condition.
- Give example: i = 0; while(i <=5), i = i + 1; d

7. **Scripts and Functions**
   - Introduction to the file formats in Scilab.
   - SCRIPT files.
   - sce versus .sci
   - Inline functions.
8. **Plotting 2D graphs**
   - About linspace: linspace is a linearly spaced vector.
   - Plot a simple graph: x=linspace(12,34,10), y=linspace(-.1,2,10), plot(x,y)
   - plot2d
   - Use of "clf()".
   - Configure the title for the plot
   - Configure a legend
   - Divide a graphic window into a matrix of sub-windows using subplot(mnp)
9. **Xcos introduction**
   - What is XCOS.
   - What is palette.
   - To collect the blocks from the palette and connect them to construct the block diagram.
   - Set the parameters of different blocks.
   - To setup the simulation parameters.
   - Simulate the constructed block diagram.

Advanced Level Scilab

1. **File Handling- Scilab File handling**
   - Writing to a file using write()
   - Reading from a file using read()
   - Opening an existing file using mopen()
   - Closing an already opened file using mclose()
2. **File Handling- User Defined Input and Output in Scilab**
   - Input Function
   - mprintf()
   - save() and load()
   - Used to quit scilab midway through calculation and continue at later stage
3. **Numerical methods- Integration**
   - Develop Scilab code for different Composite Numerical Integration algorithms
   - Divide the integral into equal intervals
   - Apply the algorithm to each interval
   - Calculate the composite value of the integral
4. **Numerical methods- Solving Non- linear Equations**
   - Learn how to solve nonlinear equations using numerical methods
   - Learn Bisection method
   - Learn Secant method
   - Learn how to develop Scilab code for solving nonlinear equations
5. **Numerical methods- Gaussian Methods**
   - Explain Gauss Elimination method algorithm
   - Explain code for Gauss Elimination method and solve an example using this code
   - Explain Gauss Jordan method algorithm

- Explain code for Gauss Jordan method and solve an example using this code

6. **Numerical methods- Iterative Methods**
   - Solve system of linear equations using iterative methods
   - Use Jacobi and Gauss Seidel iterative methods
   - Learn how to iterate until we converge at the solution
   - Learn how Gauss Seidel method is faster than Jacobi method
   - Develop Scilab code for these two methods to solve linear equations
7. **Numerical methods- Interpolation**
   - Develop Scilab code for different Numerical Interpolation algorithms
   - Calculate new value of function from given data points
8. **Numerical methods- ODE- Euler methods**
   - Solve ODEs using Euler and Modified Euler methods
   - Develop Scilab code to solve ODEs
9. **Numerical methods- ODE- Applications**
   - Use Scilab ode function
   - Solve typical examples of ODEs
   - Plot the solution
   - examples Motion of simple pendulum Van der Pol equation
   - Lorenz system
10. **Optimization Using Karmarkar Functions**
    - About Optimization
    - Use of Scilab function Karmarkar in Optimization
11. **Digital Signal Processing**
    - Plotting continuous and discrete sine wave.
    - Plotting step function.
    - Plotting ramp function.
12. **Control systems**
    - Define a continuous time system: second and higher order
    - Response plot for step input
    - Response plot for sine input
    - Bode plot
    - Study numer and denom Scilab functions
    - Plot poles and zeros of function
13. **Discrete systems**
    - Define discrete time system variable z
    - Define first order discrete time system
    - Explain ones, flts, dscr, ss2tf functions
14. **Calling User Defined Functions in XCOS**
    - Write a squaring function
    - Use of scifunc block in XCOS
    - Use of MUX block
    - Call functions having multiple inputs and output
15. Simulating a PID controller using XCOS
    - Modifying firstorder.xcos file to implement a PID controller
    - Closing the loop
    - Setting PID gains and observing its response
    - Plotting the required data
16. Developing Scilab Toolbox for calling external C libraries
    - Compiling an external C library
    - Generating shared library
    - Copying the shared library to Scilab Toolbox
    - Interfacing the shared library with Scilab
    - Understanding the important code sections for interfacing
    - Building a Scilab Toolbox using this library

- Loading the toolbox
- Executing an example in help
- Verification of results
- Understanding how to write Help for Toolbox functions

17. Developing Scilab Toolbox for calling Python and its functions
    - About Scithon toolbox
    - About header folder
    - Interfacing between Scilab and Python
    - Files used for starting the python instance and overloaded virtual functions
    - Links to understand the code inside the PyVar.CPP file
    - About Builder script of scithon toolbox
    - About Gateway functions
    - How to build a toolbox
    - How to load a toolbox
    - Demo on how to execute the python functions in Scilab

SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY, MANAGEMENT & GRAMOTHAN

CERTIFICATE COURSE

ON

CRAFTING SKILLS FOR EMPLOYABILITY

FOR

MBA STUDENTS

OVERVIEW

Objective: To enhance Employability Skills of the final year students of MBA

Course Duration: Eight Weeks

Sessions: 16 (Two sessions @ 1 hour per week)

Session 1: Crafting Employability Skills

Functional aspects and knowledge of employability skills

Session 2: Soft Skills and Hard Skills

How important are SS & HS in jobs?

WEEK 2

Session 3: SWOT Analysis/ Writing Skills

Know Thy Self

Session 4: Writing Your Autobiography: Branding Yourself

WEEK 3

Session 5: Body language and Nonverbal Cues/ Introverts, Extroverts & Ambiverts
Let the body speak

Session 6: Writing Personality Statement/ Resume

WEEK 4

Session 7: Interview Skills:

Paths and subways

Session 8: Presentation Skills:

Express Your Ideas

WEEK 5

Session 9: GD Skills/ Conducting GD: Barriers & Gateways

Session 10: Emotional Intelligence: Recognize & Mange Behaviours and Moods

WEEK 6

Session 11: PositiveAttitude: Generate trust, openness and understanding with self and others

Session 12: Leadership Skills- S**trategies from Mahabharat:** Become your Own Master

WEEK 7

Session 13: Decision Making / Conducting Meetings: Building Rapport

Session 14: Mock Interviews

WEEK 8

Session 15: Presentations by participants

Session 16: Feedback by participants

Swami Keshvanand Institute of Technology, Management & Gramothan

DEPARTMENT OF MANAGEMENT STUDIES

NOTICE

Certificate Course

Date: January 17, 2017

This is to inform all the MBA III Semester students that our department is starting VALUE ADDITION CERTIFICATE COURSE, which is duly approved by Director (Academics), SKIT. Students who are interested in joining this course are advised to contact in the department. The classes will be held in department itself between 2:30 pm to 3:30 pm.

Details of Course

Course : International Business and Export-Import Mechanism

Duration : 30 Hours

Certificate will be awarded on the completion of course.

Further, students may note that:

1. It is mandatory for all registered students to attend these classes.

2. 75% attendance is compulsory (Attendance in these classes will be considered towards calculations of class attendance).

3. Classes will be held in the Seminar hall. (Commence from 19/01/2017 to 28/02/2017).

Copy to:

i. Director

ii. Principal

iii. Registrar

iv. All HODs and Faculty Members

vi. All Notice Board

Vikas S.

Dr. Vikas Shrotriya (Coordinator)

Swami Keshvanand Institute of Technology, Management & Gramothan

Ramnagaria, Jagatpura, Jaipur-302017

DEPARTMENT OF MANAGEMENT STUDIES

(Cost Effective Quality Education with Focus on Individual Development)

Value Addition Certificate Course

"International Business and Export - Import Mechanism"

Course Content

Module No.	Topic/Content	Hours
1	International Business, Principles And Practices	3
2	International Marketing Management, Cross Cultural Aspects, Export-Import Mechanism	8
3	Introduction to Forex Mechanism	3
4	International Logistics & Supply Chain Management	4
5	Mergers & Acquisition & Corporate Restructuring	6
6	Foreign Exchange Management And Trade Finance International Banking Procedures	6

Swami Keshvanand Institute of Technology, Management & Gramothan

DEPARTMENT OF MANAGEMENT STUDIES

NOTICE

Certificate Course

Date: August 13, 2016

This is to inform all the MBA III Semester students that our department is starting ADD ON CERTIFICATE COURSE, which is duly approved by Director (Academics), SKIT. Students who are interested in joining this course are advised to contact in the department. The classes will be held in department itself between 2:30 pm to 3:30 pm.

Details of Course

Course : Financial Services & Consultancy

Duration : 30 Hours

Certificate will be awarded on the completion of course.

Further, students may note that:

1. It is mandatory for all registered students to attend these classes.

2. 75% attendance is compulsory (Attendance in these classes will be considered towards calculations of class attendance).

3. Classes will be held in the Seminar hall. (Commence from 16/08/2016 to 30/09/2016).

Copy to:

i. Director

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Vikas S.

Dr. Vikas Shrotriya (Coordinator))

Swami Keshvanand Institute of Technology, Management & Gramothan

Ramnagaria, Jagatpura, Jaipur-302017

DEPARTMENT OF MANAGEMENT STUDIES

(Cost Effective Quality Education with Focus on Individual Development)

Value Addition Certificate Course

"Financial Consultancy & Services"

Course Content

Module No.	Topic/Content	Hours
1	Introduction	1
2	Live Life King Size (Individual Financial Planning)	3
3	Save Tax: Create Wealth (Tax Planning)	6
4	E-Filing of ITR	6
5	Secure Your Dear Ones (Insurance Management)	4
6	Deal with Plastic Money (Debit & Credit Card Management)	3
7	Money Power (Wealth Creation)	3
8	Retirement Planning	2
9	Buy or Wait (Types of Loans & Its Management)	2

Swami Keshvanand Institute of Technology, Management & Gramothan

DEPARTMENT OF MANAGEMENT STUDIES

NOTICE

Certificate Course

Date: August 3, 2017

This is to inform all the MBA III Semester students that our department is starting ADD ON CERTIFICATE COURSE, which is duly approved by Director (Academics), SKIT. Students who are interested in joining this course are advised to contact in the department. The classes will be held in department itself between 2:30 pm to 3:30 pm.

Details of Course

Course : Financial Services & Consultancy

Duration : 30 Hours

Certificate will be awarded on the completion of course.

Further, students may note that:

1. It is mandatory for all registered students to attend these classes.

2. 75% attendance is compulsory (Attendance in these classes will be considered towards calculations of class attendance).

3. Classes will be held in the Seminar hall. (Commence from 07/08/2017 to 23/09/2017).

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Vikas S.

Dr. Vikas Shrotriya (Coordinator)

Swami Keshvanand Institute of Technology, Management & Gramothan

Ramnagaria, Jagatpura, Jaipur-302017

DEPARTMENT OF MANAGEMENT STUDIES

(Cost Effective Quality Education with Focus on Individual Development)

Value Addition Certificate Course

"Financial Consultancy & Services"

Course Content

Module No.	Topic/Content	Hours
1	Introduction	1
2	Live Life King Size (Individual Financial Planning)	3
3	Save Tax: Create Wealth (Tax Planning)	6
4	E-Filing of ITR	6
5	Secure Your Dear Ones (Insurance Management)	4
6	Deal with Plastic Money (Debit & Credit Card Management)	3
7	Money Power (Wealth Creation)	3
8	Retirement Planning	2
9	Buy or Wait (Types of Loans & Its Management)	2

Swami Keshvanand Institute of Technology, Management & Gramothan

DEPARTMENT OF MANAGEMENT STUDIES

NOTICE

Certificate Course

Date: January 18, 2018

This is to inform all the MBA III Semester students that our department is starting VALUE ADDITION CERTIFICATE COURSE, which is duly approved by Director (Academics), SKIT. Students who are interested in joining this course are advised to contact in the department. The classes will be held in department itself between 2:30 pm to 3:30 pm.

Details of Course

Course : International Business and Export-Import Mechanism

Duration : 30 Hours

Certificate will be awarded on the completion of course.

Further, students may note that:

1. It is mandatory for all registered students to attend these classes.

2. 75% attendance is compulsory (Attendance in these classes will be considered towards calculations of class attendance).

3. Classes will be held in the Seminar hall. (Commence from 22/01/2018 to 2/03/2018).

Copy to:

i. Director

ii. Principal

iii. Registrar

iv. All HODs and Faculty Members

vi. All Notice Board

Vikas S.

Dr. Vikas Shrotriya (Coordinator)

Swami Keshvanand Institute of Technology, Management & Gramothan

Ramnagaria, Jagatpura, Jaipur-302017

DEPARTMENT OF MANAGEMENT STUDIES

(Cost Effective Quality Education with Focus on Individual Development)

Value Addition Certificate Course

"International Business and Export - Import Mechanism"

Course Content

Module No.	Topic/Content	Hours
1	International Business, Principles And Practices	3
2	International Marketing Management, Cross Cultural Aspects, Export-Import Mechanism	8
3	Introduction to Forex Mechanism	3
4	International Logistics & Supply Chain Management	4
5	Mergers & Acquisition & Corporate Restructuring	6
6	Foreign Exchange Management And Trade Finance International Banking Procedures	6

Swami Keshvanand Institute of Technology, Management & Gramothan

DEPARTMENT OF MANAGEMENT STUDIES

NOTICE

Certificate Course

Date: January 25, 2019

This is to inform all the MBA III Semester students that our department is starting VALUE ADDITION CERTIFICATE COURSE, which is duly approved by Director (Academics), SKIT. Students who are interested in joining this course are advised to contact in the department. The classes will be held in department itself between 2:30 pm to 3:30 pm.

Details of Course

Course : International Business and Export-Import Mechanism

Duration : 30 Hours

Certificate will be awarded on the completion of course.

Further, students may note that:

1. It is mandatory for all registered students to attend these classes.

2. 75% attendance is compulsory (Attendance in these classes will be considered towards calculations of class attendance).

3. Classes will be held in the Seminar hall. (Commence from 27/01/2019 to 8/03/2019).

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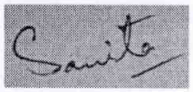

Dr. Savita Choudhary (Coordinator)

Swami Keshvanand Institute of Technology, Management & Gramothan

Ramnagaria, Jagatpura, Jaipur-302017

DEPARTMENT OF MANAGEMENT STUDIES

(Cost Effective Quality Education with Focus on Individual Development)

Value Addition Certificate Course

"International Business and Export - Import Mechanism"

Course Content

Module No.	Topic/Content	Hours
1	International Business, Principles And Practices	3
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6	Foreign Exchange Management And Trade Finance International Banking Procedures	6

Swami Keshvanand Institute of Technology, Management & Gramothan

DEPARTMENT OF MANAGEMENT STUDIES

NOTICE

Certificate Course

Date: August 2, 2018

This is to inform all the MBA III Semester students that our department is starting ADD ON CERTIFICATE COURSE, which is duly approved by Director (Academics), SKIT. Students who are interested in joining this course are advised to contact in the department. The classes will be held in department itself between 2:30 pm to 3:30 pm.

Details of Course

Course : Financial Services & Consultancy

Duration : 30 Hours

Certificate will be awarded on the completion of course.

Further, students may note that:

1. It is mandatory for all registered students to attend these classes.

2. 75% attendance is compulsory (Attendance in these classes will be considered towards calculations of class attendance).

3. Classes will be held in the Seminar hall. (Commence from 08/08/2018 to 21/09/2018).

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i. Director

ii. Principal

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Vikas S.

Dr. Vikas Shrotriya (Coordinator)

Swami Keshvanand Institute of Technology, Management & Gramothan

Ramnagaria, Jagatpura, Jaipur-302017

DEPARTMENT OF MANAGEMENT STUDIES

(Cost Effective Quality Education with Focus on Individual Development)

Value Addition Certificate Course

"Financial Consultancy & Services"

Course Content

Module No.	Topic/Content	Hours
1	Introduction	1
2	Live Life King Size (Individual Financial Planning)	3
3	Save Tax: Create Wealth (Tax Planning)	6
4	E-Filing of ITR	6
5	Secure Your Dear Ones (Insurance Management)	4
6	Deal with Plastic Money (Debit & Credit Card Management)	3
7	Money Power (Wealth Creation)	3
8	Retirement Planning	2
9	Buy or Wait (Types of Loans & Its Management)	2

ENTREPRENEURSHIP DEVELOPMENT PROGRAMME

IN ASSOCIATION WITH

SIDBI

A BRIEF REPORT

INTRODUCTION – ***An overview***

Developing winning business plans has always been the prime goal of every new idea put forward by an entrepreneur.

EDP provides participants to learn and understand effective management of accounts, labour market and venture risk. Besides this, it is important to navigate the venture capital investment process as well as interpret customer needs and quantify the value proposition. The learning process is a stepwise procedure to create, identify and evaluate new venture opportunities.

Objectives –

The prime objective of this course was to build a firm foundation for the students who are aspiring to be future entrepreneurs. The main objective of the programme is to develop basic entrepreneurship skills, opportunity evaluation and B-plan preparation. Mentoring by industry and domain experts inculcates logical analytical skills in the participants. Exposure to Industry Institute Interface - SME specific to Rajasthan will made participants aware about the industrial outlook of the area familiar to them. Hands on training experience counts to made the participants adopt to the entrepreneurial culture.

Docket –

Session 1: Entrepreneurial Management-Introduction & Framework
Session 2: Corporate Entrepreneurship/Intrapreneurship
Session 3: Entrepreneurial Organizations and Strategic Management
Session 4: Managing People and Performance in Entrepreneurial Organizations
Session 5: Innovation and Entrepreneurial Marketing
Session 6: Finance & Accounts for Entrepreneurial Managers
Session 7: Managerial Competencies as an Entrepreneurial Manager
Session 8: Women & Entrepreneurship
Session 9: Risk Management for Entrepreneurs
Session10: Analysis of Competencies & Assessing Potential Entrepreneurs
Session 11: Business Opportunity Identification & Business Plan Preparation
Session 12: Small Business Management
Session 13: Agro Food Processing
Session 14: Session on Marble Industry of Rajasthan
Session 15: Session on Growth and Challenges of Gem and Jewellery Industry of Rajasthan
Session16: Session on Demystifying the Handicraft Industry of Rajasthan
Session 17: Designing & Managing Support Services for Potential Entrepreneurs
Session 18-21: Effective Business Counseling
Session22-28: Field Visits to training/industrial support Institutions and small enterprises
Session 29-30: Debrief, Presentations and Valediction Ceremony

Risk Management for Entrepreneurs-

An interactive session "Risk Management" was conducted with some examples related to risks which entrepreneurs encounter as a daily challenge by Mr. Harminder Singh Multani.

Different types of risks, for example-ignorance risks, financial risks, technology risks, nuisance risks, competitive risks, insurance risks etc. were discussed. Some measures for risk management, like having proper business idea, budget management, working in partnership etc. were mentioned to avoid issues related to risk management.

Finance and Accounts-

The session conducted by Prof. Vikas Shrotriya was based on Finance which began with a discussion on how entrepreneurship differs from business, difference between marketing and selling, demand and supply etc. When we provide a solution to a problem for our society, we'll definitely sustain. Ingredients which are required in setting up a firm consisting of land, building, capital, manpower, machinery, cash management, raw material etc. were also discussed

Entrepreneurship & Small Bussiness Management-

The session conducted by Mr. Alok Kulshreshtha,
was based on the discussion of 'Importance of Entrepreneurship & Small Bussiness Management'. The session began with a discussion on generation of ideas and smart work and proceeded towards the importance of entrepreneurship in today's era, characteristics of entrepreneurs including initiatives, risk taking capability, mental ability, optimism and good relationships.

Corporate Intrapreneurship-

Corporate intrapreneurship is nothing but 'a group of people going, in essence, back to the garage, but in a large company' and its various aspects are product & service innovation, process innovation and market development was taught by Prof. S.P. Garg in his session on Corporate Intrapreneurship.
Apart from this, various related terms like JIT, TQM etc. were also discussed. The cases of various ventures in Jaipur like Tapri, Chain Point, Tea Trails etc. were also discussed with the hope to inculcate the entrepreneurial skills in our country's future entrepreneurs

Managing People and Performance in Entrepreneurial Organizations –

An interactive session with the members of E-Cell, IIT Kharagpur was conducted where the participants discussed about managing people and their performance in entrepreneurial organizations. Strategies like image building in the professional sphere, production of better services, withdrawal of invested money from the firm, differences between profit maximization and wealth maximization were also discussed.

Industrial Visit at Delhivery-

An industrial visit was organized under the roof of EDP in which 30 participants visited "Delhivery: Courier Delivery Company". An engineer in charge of Delhivery gave a brief introduction about the company and about its foundation. It has over 2500 employees now, serving thousands of customers every day and company has even expanded its operations to a few major cities. It has collaborated with numerous e-commerce portals. Participants visited logistic section and then various other sections where he explained the process involved in the courier service. There were different sections for wrapping the products (bubble wrapping or shrink wrapping). The courier service is based on Hub Scope model.

Launch of Entrepreneurship Development Programme (EDP) in association with SIDBI

For student entrepreneurs, the major hurdle has always been the financial aid. To them, SIDBI has come out to be a boon since SIDBI invests on the ones who have innovative ideas and high aspirations so that they could turn their ideas into actions.
The course was designed to cover different aspects of entrepreneurship so that students could get to know about the market segments, the challenges to be faced, and the preventive measures to be taken.

E-Momentum- 2015

The orientation ceremony 'E-Momentum-2015' was organized with an objective of making the audience aware of what TOPAZ is about. It started with the glimpses of the accomplishments EDC-TOPAZ has made. Students were enlightened by learned dignitaries about the primitives of entrepreneurship. The audience was wised up with the efforts that TOPAZ makes to help entrepreneurs build a strong base and climb the ladder of success. Students seemed to be highly inspired and committed themselves to their respective dreams

Webinars

In order to build a robust entrepreneurship ecosystem on campus, goal setting and planning plays an important role. To fulfil this objective, a webinar themed as '5 Things I Knew Before Starting Up' was organized.

DMS fruitfully launched two value addition certificate courses under PROMISE programme, one on "International Business and Export-Import Mechanism" and the other one on "Financial Consultancy and Services".

A panel discussion on "Downfall of Stock Market" was successfully organized to made students aware of the factors on which stock market works.

The Department successfully organized a workshop on "Retail Payments Digital Money". Mr. M. K. Kothari, Ex-Executive of RBI was the expert.

DMS successfully organized a seminar in collaboration with Directorate General of Foreign Trade (DGFT) on "Foreign Trade Policy and Procedures". The seminar highlighted the concept of trading overseas and the policies which are laid by the Indian trade system were discussed broad.

Neeraj Dhawan. SKIT.

Campus Connect
Soft-Skills Program Deployment Guide

Version 3/September'10

campus connect™

An Infosys® Industry-Academia Partnership Program

Document Version 3

September 2010

This guide is a publication of Campus Connect core team in collaboration with Professional Skills Development (PSD) and is produced by the COMMUNICATION DESIGN GROUP of Infosys Limited.

Contents

Message from Campus Connect Team

Dear Professor:

GREETINGS!

We appreciate your participation in the Campus Connect program. One of the core elements in the Campus Connect initiative is the Soft Skills Program.

Deploying Soft Skills Program in your college just got easier. This guide is a one-stop document for rolling out Soft Skills program in your college.

This guide is designed to consolidate various details such as –

1. Overview of Soft Skills program
2. The process steps that helps you rollout Soft Skills Program smoothly and systematically
3. Guidelines to evolve your college specific practices
4. Checklists to ensure readiness at each phase of rollout
5. Contacts

The contents of this guide is a collection of industry best practices for managing training program roll-out and experiences of Infosys in delivering Soft Skills Training to hundreds of batches. We strongly believe that proper planning, measurement and periodic reviews are critical to successful program rollout. Campus Connect initiative aims to share our Soft Skills program related IP to enable you to deliver the courseware better.

Effective delivery of the Soft-Skills training will lead to making engineering students 'Industry Ready' and take-on challenging projects in IT enterprises.

We would like this to be a dynamic document with improvements being carried-out with your inputs. Please do share your valuable suggestions to help us make the guide more useful to you.

We look forward to mutually beneficial relationship with your college. For further information, please contact your Infosys DC SPoC.

Happy Reading and Actions!

With Best Regards

Team Campus Connect

Organization of SS Deployment Guide

The Soft Skills Program Deployment Guide is organized in the same sequence in which you will plan, announce, deliver and assess students on the Soft Skills training.

Chapter	Contents
Preface	About this guide, Conventions, Abbreviations Used, Reading Plan for the guide
Chapter 1	Introduction
Chapter 2	Soft-Skills Deployment Process
Chapter 3	Pre-Deployment Tasks
Chapter 4	Deployment Tasks
Chapter 5	Post-Deployment Tasks
Appendix	Glossary
	Campus Connect Overview
	Frequently Asked Questions
	Templates
	Samples

The Soft Skills Deployment Guide is provided with additional tabs that will help you keep batch specific information such as contacts, students list, scores, communication with Infosys DC SPoC and so on organized in the same binder. Ensure that all key documents are filed together in this binder.

Preface

This section of the guide provides you information about the guide, the intended audience, conventions and abbreviations used in this guide. The suggested reading plan for different roles is also included.

On reading this chapter, you will get the context of the guide and will be familiar with the terms used in this guide.

Abbreviations and Acronyms

Welcome to the Campus Connect Soft Skills Deployment Guide. As the name suggests, this deployment guide is associated with the Campus Connect initiative. This guide is created to help the College Core Team members involved in rolling out the Soft Skills Program successfully at Campus Connect partner colleges. Detailed step-by-step instructions will guide you through the process of deployment. The following features will enable to understand the deployment process, faster:

- *Templates* to fill-in data. You can create plans, schedules, etc. faster by using the templates.
- *Samples* help you interpret the use of templates.
- *References* to topics provide comprehensive knowledge of the topic.
- A *Table of Contents* helps you navigate through this guide.
- *Glossary and Appendices* describe the terminology and concepts associated with the program rollout.
- An *overview* of the 'Campus Connect' initiative to keep you informed about the different programs under Campus Connect.
- *Related topics* for each chapter provide one-point references to all topics associated with the chapter.

(i) Audience

This guide addresses the *College Core Team* that is charged with the responsibility of planning and implementing the Soft Skills Program at their College. However, the college Management members, the faculty, Campus Connect Single Point of Contact (SPoC), Subject Matter Experts and other staff of the college who are involved in the Soft Skills Program rollout as well as the regional Campus Connect team members can refer to this guide to:

- Know about the Soft Skills Deployment process
- Learn the detailed steps involved
- Identify the resources required for deployment
- Consistently roll-out Soft Skills training for batches each year

(ii) Conventions Used

Convention	Description
	Indicates a note message. The text is highlighted in blue.
	Indicates important information. The text is in brown.
	Indicates reference to other topics in the guide. The text is in *italics* and dark blue.

(iii) Abbreviations and Acronyms

Abbreviation	Expansion
CC	Campus Connect
CS	Computer Science
DC	Development Center
DA	Developmental Assignment
DD-MMM-YYYY	Date format. For example, 25-Jun-2003
E&R	Education and Research
PSD	Professional Skills Development
FEP	Faculty Enablement Program
HOD	Head of the Department
IBU	Integrated Business Unit
IPR	Intellectual Property Rights
IT	Information Technology
MoU	Memorandum of Understanding
NDA	Non Disclosure Agreement
SME	Subject Matter Expert
SPoC	Single Point of Contact
SS	Soft Skills
Sl.No.	Serial Number
TTT	Train The Trainer

See Glossary for a description of certain terms used in the context of Campus Connect program.

Reading Plan for this guide

The following table identifies the topics that you will need to read based on your role and practice the same during SS roll-out activities.

Profiles	Purpose	Suggested Topics
College Management, Head of the department, College SPoC and similar members who wants to know about the Soft-Skills Program.	Get familiarized with the terminology used in the context of Campus Connect programs.	Glossary Abbreviations & Acronyms
	Know about the Campus Connect programs.	About Campus Connect About the Soft-Skills Program
	Get overall picture of the SS deployment process.	SS Deployment Process Roles & Responsibilities Resources
	Be familiar with the plans and reports involved in the process of SS rollout.	Sample Plans & Reports
College Core Team member responsible for SS rollout.	Get familiar with the terminology. Get an overview of the SS Program. Know the process and detailed steps required to plan and execute the SS rollout. Develop in-depth understanding of the process. Develop ability to apply the process steps described. Use the templates available.	All sections of this guide.
Reviewers of the Soft-Skills program rollout.	Get familiar with the terminology, process of deployment, and refer to samples.	About the Soft-Skills Program SS Deployment Process Glossary Checklists – Pre-deployment, Deployment and Post deployment Sample Plans & Reports
Faculty (SMEs), who plan the course schedule and assessment instruments	Plan the course schedule and create student assessment papers & quiz.	About the Soft-Skills Program SS Deployment Process Glossary Plan the Course Schedule Course Overviews and syllabus in the Prepare for Courseware Delivery topic Course Plan Sample Course Plan Template Student Assessment Guidelines Sample Case-Studies

Profiles	Purpose	Suggested Topics
Faculty who delivers the course.	Understand the purpose of SS rollout.	About the Soft-Skills Program SS Deployment Process Glossary
	Be thorough with the subject to teach. Evaluate students' performance. Track the effort spent and progress of the course delivery.	Deployment Tasks
Infosys Certified Alliance Partner	Course Delivery, Assessment	Deployment Tasks

Chapter 1

Introduction

This chapter answers your basic questions such as "What is Campus Connect? What is Campus Connect Soft-Skills Program? Who will benefit from the program? What does the program consist of?" and so on.

Once you understand the principles of the program, you can proceed to the process of Soft-Skills Program deployment detailed in the next chapter.

About the Soft Skills Program

Campus Connect is an industry-academia partnership initiative launched by Infosys. The Campus Connect initiative aims to enhance the education level of engineering students, nationwide and thus increase the employability of these engineers. As a part of this initiative Infosys shares with partner colleges its proven courseware, methodology and education experiences. Campus Connect thus helps partner colleges groom Industry Ready engineers.

Soft Skills Program (SS) is the training program designed for entry level students who on completion will be better prepared to work on real-life customer projects. Enabling partner colleges to deliver SS is the heart of this initiative. The training programs will be administered at the Campus Connect partner colleges. These programs enhance the IT industry specific knowledge and skills of the students of engineering colleges.

If you wish to learn more about various programs of Campus Connect initiative, read the Campus Connect Overview section of this guide.

The Campus Connect (CC) initiative brings this well-tested and successful training courseware and methodology to the partnering colleges. The courses will be taught directly by the partner college faculty, who are enabled by the Campus Connect team. Campus Connect also provides the necessary courseware and support to implement and sustain the program.

The Course cover the basic knowledge required for software professional. The following is a list of **Courses** of the Soft Skills Program, in the *same sequence* in which they are delivered:

Serial Number	Course Name	Course Abbreviation
1	Business Communication Skills	BCS
2	Intrapersonal and Interpersonal Relationship Skills	IRS
3	Campus to Company	C2C
4	Group Discussions, Interviews and Presentations	GIP
5	Entrepreneurial Skills Development	ESD

Business Communication Skills (BCS) - This course provides a functional understanding of basic English Grammar, language skills to eliminate errors in pronunciation and sentence, and equips students with the requisite skills to make their communication effective.

Intrapersonal and Interpersonal Relationship Skills (IRS) - This course provides the students with information and equips them with the requisite skills to enable them to deal with feelings, understand assertiveness and develop self-confidence. It also enables them to become good team player and form an effective team.

Campus To Company (C2C) - This course helps the students in understanding the nuances of Corporate Grooming and Dressing, Corporate Etiquette and some practical tips to handle himself / herself in a given professional setting.

Group Discussions, Interviews and Presentations (GIP) - This course helps the students in understanding the basics underlying group discussions, the group decision – making process, and how to make effective presentations.

Entrepreneurial Skills Development (ESD) - This course helps students set specific measurable goals for themselves in their personal and/ or professional life.

Read more about the course objectives, detailed syllabus, and prerequisites of each course in the Syllabus, Reference Material section of this guide.

Soft-Skills training is recommended for the students of second and third years of Engineering i.e spread over 3rd and 5th semesters.

Campus Connect team periodically conducts ***Soft-Skills Workshops*** **(SS Workshops)** to train the partner college faculty on Soft-Skills course delivery. The faculty experiences the training system, courseware and methodology as used at Infosys and hence is completely equipped to roll out the training program at their college.

Campus Connect team typically conducts a Road Show to reach out to the students at the respective partner college. It is organized as a half-day program at the college campus. The interactive sessions and presentations during the road show provide students with information about the Campus Connect initiative in general and Soft-Skills program in particular.

Campus Connect portal is a window to the connected world of learning. Through the portal students and faculty members could learn about the Campus Connect initiative, enhance knowledge, share their experiences with other colleges in India & abroad, interact with their college alumni and learn about various activities of professional interest.

Visit Campus Connect portal at http://campusconnect.infosys.com. You need to be a registered user to access the information on this portal. Visit the site for registration.

Any changes or updates to the Soft-Skills Program courseware are made available in the **Campus Connect portal**.

1. **You are encouraged to respect the Intellectual Property Rights (IPR) and Non-Disclosure Agreement (NDA) related to the Campus Connect programs.**
2. **Refrain from using any trade name, trade mark, symbol or designation belonging to the Company or Campus Connect, without prior written approval.**
3. **Maintain confidentiality about any information, course material, plans, discussions, strategies or any material which is deemed to be confidential.**
4. **Do not use the name of the Company and the Campus Connect initiative in any advertisement, and do not make any public announcement without a prior written approval from the Company.**

Chapter 2

Soft-Skills Deployment Process

This chapter explains the process involved in rolling out the Campus Connect Soft-skills Program at a partner college. You will find in this chapter a diagram that depicts the complete process, roles and responsibilities of the people involved in rollout, and some of the resources required for rollout.

Once you are familiar with the process, you can proceed to learn the details of process steps, explained in the chapters that follow.

Soft-Skills Program Deployment Process

Soft-Skills Program training is administered at a Campus Connect partner college.

The process of Soft-skills Rollout is divided into 3 sections – *Pre-deployment, Deployment, and Post-deployment,* for the ease of understanding. Pre-deployment involves planning and preparation for the rollout. Deployment involves course delivery and student performance assessment. Post-deployment involves reporting and feedback. The following figure depicts the entire process.

PRE-DEPLOYMENT	DEPLOYMENT	POST-DEPLOYMENT
Create Awareness about the program	Pre Assessment (Get the question bank from Infosys SPoC)	Collect Student Feedback
Understand the Rollout Process	Prepare for Courseware Delivery	Present a Report on Program Completion
Identify Program Anchor	Deliver Courseware	Submit Soft-Skills Feedback Form
Enable Faculty	Assign Developmental Assignments (DAs)	Submit Program Closure Report
Alliance Partner Engagement (Optional)	Review/Grade DAs	Quality Check by Infosys SPoC
Plan Batch(es)	Assess Student Performance	Issue Certificates
Select Faculty	Record Student Performance	
Announce the Program	Post Assessment (Get the question bank from Infosys SPoC)	
Select Students		
Prepare Detailed Rollout Plan and Review with Infosys		
Get Resources and Course Material		
Announce Course Schedule		

Roles and Responsibilities

(i) College

Deployment of the Soft-Skills Program at a Campus Connect Partner College involves different members of the college in different roles as described in the following table.

Role	Description	Activities Involved
College SPoC (Single Point of Contact)	A designated person at the college who takes the responsibility of interfacing with Campus Connect team. Typically, a Placement Officer or Training Officer or HOD is appointed as a College SPoC.	▪ Contacts regional Campus Connect team for any kind of requests, reviews, status updates, etc. ▪ Interfaces with the college core team, college Management and Administration to ensure smooth roll-out of Campus Connect.
College Core Team	The core team is the backbone to implement the Campus Connect initiative. The college identifies a team of faculty members who will plan & deliver the training. The core team works right from the rollout planning stage through course completion. The entire set of activities relating to Campus Connect are planned and executed by the college core team. The faculty who attends the Soft-Skills workshop should be a part of the College Core Team.	• Prepares program rollout plan. • Updates status reports. • Prepares course schedules. • Assess students performance • Delivers lectures to students. • Plans contact sessions • Counsels students • Reviews roll-out effectiveness
Head of the Institution	The head of the institution provides management support to the Core Team for a smooth deployment of the program.	• Motivates students and faculty. • Oversees the Campus Connect programs implementation. • Periodically reviews Campus Connect plans and progress. • Authorized signatory for certificates.
College Management	The management at the partner college has to approve course rollout related activities that are internal to the college.	• Approves course rollout related activities that are internal to the institute. • Decides the criteria to select students for the soft-skills program. • Issues course completion certificates. • Implements Campus Connect incentive plan

(ii) Infosys Alliance Partner for Soft-Skills

Infosys has identified some leading Soft-Skills training firms as "Alliance Partners" for soft-skills. The Alliance Partners clearly understand the rollout process, delivery methodology and assessment procedure.

The colleges can discuss with the Alliance Partners during the planning stage of the Rollout, in case they feel the need for external assistance. However, this is not mandatory.

Role	Description	Activities Involved
Alliance Partner Management	The Alliance Partner Management needs to have a clear idea about the rollout process so that they can service the colleges that seek their support.	• Understands the Soft-Skills rollout process as documented in this guide • Comes out with a plan on the different services they can offer to the colleges (lecture delivery, contact session handling, assessment, faculty enablement etc) • Shares the plan with the associated DCs and discusses with them • Keeps in touch with the associated DCs and colleges introduced by the DCs
Alliance Partner Faculty	The Alliance Partner Faculty conducts lecture sessions or assessments as requested by the college.	• Understand the Soft-Skills training program structure • Prepare to deliver Infosys soft-skills courseware • Prepare to assess the students undergoing the program

(iii) Infosys

Infosys Education & Research (E&R) team at the corporate and regional levels direct and implement the Campus Connect programs. Some of the roles are described below: Apart from the above mentioned roles applicable at the college, several employees of Infosys provide implementation support.

Role	Description	Activities Involved
Infosys Development Center SPoC (Single Point of Contact)	**The DC SPoC is a member of E&R located at the Infosys development center which is associated with the college for Campus Connect support.**	• **Provides guidance to the partner college for Campus Connect roll-out.** • **Services requests such as Seminars, Industry visits, courseware queries and review of case-studies.** • **Coordinates with local DC team for Campus Connect roll-out help.**

(iv) Resources

The resources required for deployment of the Soft-Skills Program at your college include:

1. Trained Faculty to deliver the courses and handle the contact sessions
2. Backup faculty to handle the courses in case of emergencies
3. Infrastructure and facilities

(v) Essential Infrastructure & Facilities

For a quality rollout of the Soft-Skills Program, the college needs to plan for and allocate:

1. Classrooms to conduct lecture sessions (with overhead projector)
2. Discussion rooms for contact sessions and group discussions
3. Dedicated server space to share the courseware, case-studies, projects and Campus Connect related information
4. User IDs to access the Campus Connect information from the server or CC portal by the students and faculty involved with Campus Connect programs
5. Multiple copies of the course material – either in print or on CDs
6. Reference Books for Additional Reading
7. Projector for making effective presentations
8. Flip charts, white board markers, white board erasers, and so on required in the classroom
9. Internet connection with a minimum of 64KB bandwidth to access material from the CC portal and download the course material.
10. Exclusive telephone connections for the faculty involved with Soft-Skills deployment
11. Email IDs, mobile phones (optional) for the faculty working on Soft-Skills deployment
12. Speaker-phone for teleconferencing/ discussion with Infosys team
13. Online lab to conduct assessments

(vi) Desirable Infrastructure & Facilities

Other infrastructure that will significantly improve the effectiveness of course delivery includes:

1. An exclusive CC notice board to share Campus Connect related announcements and news
2. A separate book section in the college library for Campus Connect reference books, course material, and so on.
3. Dedicated conference room / discussion room / lecture hall / seminar hall
4. A special intranet site or pages in the college website to cover CC.
5. Banners, posters, etc. on Campus Connect, to improve visibility of the programs.
6. Special student journals on Campus Connect activities at the college

7. Customized notepads for students and faculty who attend the Soft-Skills Program

Related Topics:

Pre-deployment Tasks

Deployment Tasks

Post-deployment Tasks

Chapter 3

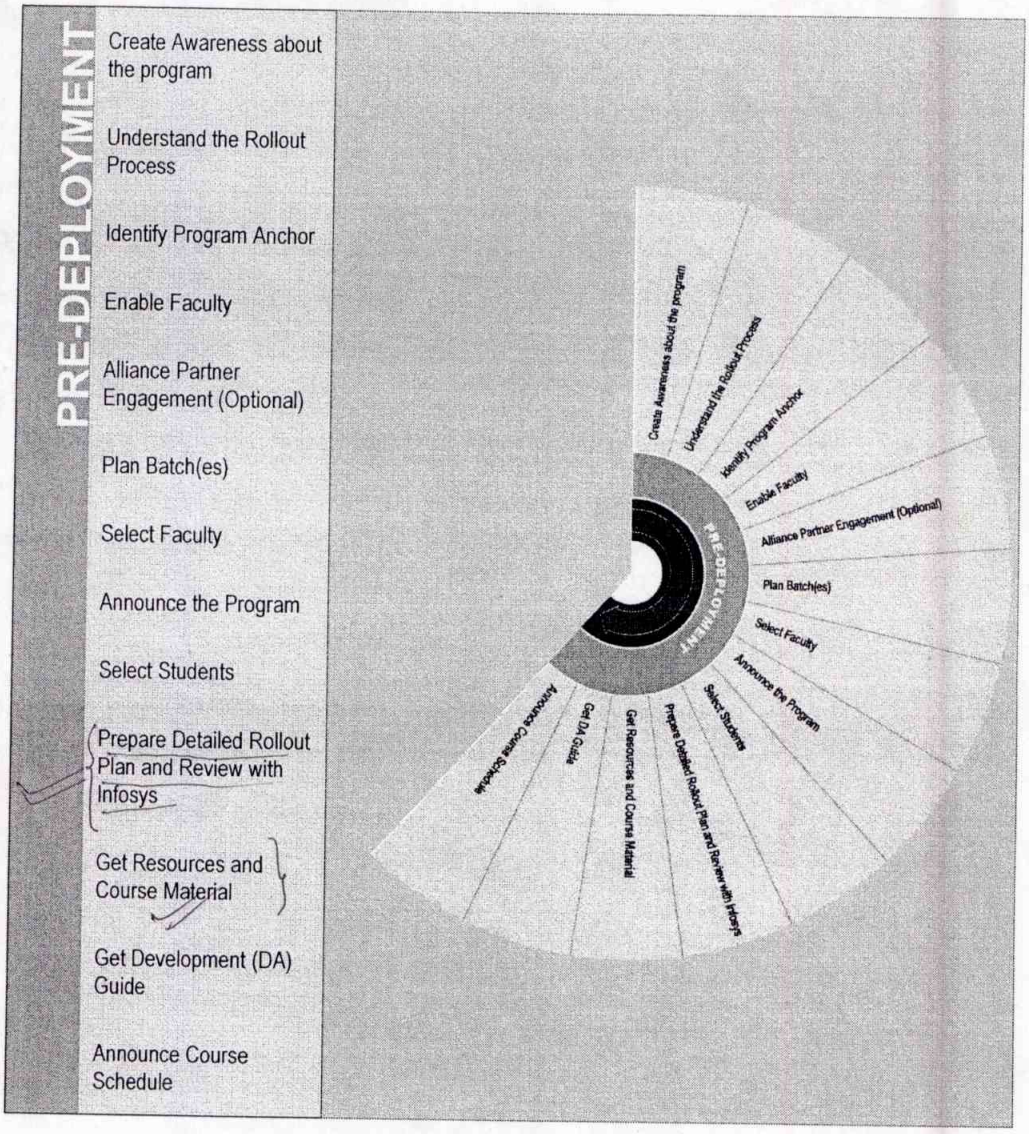
Pre-Deployment Tasks

This chapter guides you through the tasks involved in planning and organizing the implementation of Soft-skills Program at your college. It explains the steps involved in each activity, expected outcome at the end of each step and the artifacts used for deployment such as guidelines, samples and templates relevant to the steps.

Use the checklist provided at the end of the chapter to ensure that you are ready for deployment.

Pre-Deployment Tasks

The series of Pre-deployment tasks that will prepare you to kick-off the deployment of the Soft-Skills program is given below:



The following sections detail each pre-deployment task.

(a) Create Awareness about the program

Road Shows are to be conducted by the Campus Connect team to communicate the value and benefits of the program to the partner college faculty and students. Campus Connect road show, when conducted before Soft-Skills training kick-off, would provide benefits in understanding:

1. Campus Connect objectives

2. Campus Connect Offerings and their benefits
3. Benefits of Soft-Skills training, its duration, and content
4. Enrollment Criteria, student assessment and issue of certificates
5. Resources available for the faculty and students while implementing programs

It is not compulsory to conduct a road show but it is good to have the road show organized before beginning the soft-skills rollout for the benefit and visibility of the program rollout.

(b) Understand the Rollout Process

The rollout process needs to be understood in detail. Key steps here are:

1. Familiarize yourself with this guide
2. Have discussions / presentations to synchronize the understanding with other faculty members
3. Identify the points of doubt/concern and have clarification sessions with Infosys SPoC
4. Identify the soft-skills program Anchor

(c) Identify the Soft-Skills Program Anchor

Once the program is understood at a high level by the college management and the faculty members, an Anchor should be identified to take the program forward. The Anchor can be one of the following:

1. Campus Connect Single Point of Contact in the college
2. Faculty members who have attended the Soft-Skills workshop at Infosys
3. Faculty members who have the interest, expertise and time to conduct the program.

The Anchor will have to go in to the details, plan and execute the rollout.

(d) Enable Faculty

Campus Connect team periodically conducts ***Soft Skills Workshops*** **(SS Workshops)** to enable the partner college faculty members on SS course delivery. It is a one week residential program at one of the Infosys Development Centers which provides a walkthrough of the soft skills courseware and the delivery methodology and equips the faculty to roll out the same at their college.

The training provides insight into practical aspects such as case studies solving, concept implementation in addition to an overview of the five modules of Soft Skills courseware.

This includes a walkthrough of the Participant Manual to help the participating faculty record their experiences and take away from the session. The Facilitator Manual is also shared with the participants at the end of the workshop.

For this SS Workshop, colleges are required to send nominations for their faculty members who are proficient in communication and life skills, have a passion to interact with students and engage them in creative interactions and have a strong sense of commitment towards the initiatives.

For more clarification on selection of the faculty, please refer 'Select Faculty' section.

Refer the Select Faculty section for more details.

(e) Alliance Partner Engagement (Optional)

Soft skills roll-out among Campus Connect partner colleges may be classified into two categories; Direct and Partner Centric. For successful rollout of the program, it is important that each of the stakeholders understand their role, collaboration points and value-add they bring-in. This section describes the sequence of steps in developing a soft skills roll-out framework and ensuring smooth implementation of the same. It is to be noted that each Campus Connect partner college may adapt different model to start with and move to more stable model specific to the partner college.

In the Direct approach the target partner college will utilize their own Infosys trained faculty for planning and delivering soft skills development training program, much like the Infosys technical Foundation Program. The following steps describe the typical engagement model for Partner Centric approach:

Step 1: Understanding Partner College needs – This step is primarily handled by Infosys DC SPoC as this member is responsible for specific college relationship management. The DC SPoC will leverage segmentation model to service the needs of advanced colleges on priority. In this step the DC SPoC will meet with decision makers, faculty and few students to understand the current situation with reference to soft skills training in the target partner college. It may turnout that the target college has already a program in place or already taking help of local training vendor or is actively considering the demand for soft skills training. Understanding overall training needs, mapping to college plans, budget, and faculty preparedness only can result in an effective action plan preparation. The deliverable from DC SPoC at this step will be document outlining the college needs, after confirming that the target college is indeed interested to address the students' soft skills training issue.

Step 2: **Alliance Partner introduction** – In this step, Infosys DC SPoC will brief the regional certified Alliance Partner(s) about the college opportunity and collaboratively develop service offering suggestions. Infosys DC SPoC will introduce minimum of two partners to the target college and will remain neutral in the process of alliance partner selection by college. During this step CC Partner College may develop their own evaluation criteria to evaluate alliance partner suitability and chose the one appropriate their context.

Step 3**: Overall Soft skills roll-out plan presentation** – In this step the selected alliance partner will interact with the target college and develop a proposal, implementation plan, and measures of success together with commercial terms. This could be an iterative process and may need partners to make budgetary estimates, service description, reference checks. The target college will need to sign-off and accept the proposal before any training delivery. The actual plan will be the basis for all further reviews, where DC SPoC will participate. The plan may involve active participation and contribution of target college faculty in the roll-out process. Some target colleges may opt to conduct soft skills training for a pilot batch before rolling-out to large number of students.

Step 4: **Soft skills development program announcement** – In this step all stakeholders will collaborate to define target college specific schedule, develop case studies bank, set up assessment framework and allocate necessary resources. The college will also institute a student selection process and enrol students. The details of soft skills development program will be shared with students. Special attention will be given to developing newer case studies, project specifications, student assignments and projects that are relevant to target college context and can be implemented in the context of the target college.

Step 5: **Soft skills program delivery and Assessment** – In this step Alliance Partner independently or in collaboration with target college faculty will deliver the soft

skills training program. The methodology will utilize extensive team interactions, case study based learning, journaling of learnings, reading of select books and class room facilitations. Alliance partner may assist in customizing Infosys suggested assessment model and also conduct student assessments. During this phase the college Core Team will need to collect feedback from students and conduct several reviews to ensure training effectiveness. Infosys DC SPoC and Alliance Partner will participate and help in situation analysis and development of corrective measures.

Some of the partner colleges may leverage the Infosys trained faculty members to conduct student assessments, review student journals and assess project status as well as mentor students. The college takes responsibility to make payments to the Alliance Partner per agreed commercial terms.

Perspective	Infosys DC SPoC	Alliance Partner	College
Value-Add	▪ Relationship management ▪ Soft skills courseware ▪ Deployment framework ▪ Faculty training ▪ CC Portal resources and tracking ▪ Incentives and learning resources ▪ Partner network	▪ Effective delivery experience ▪ Familiarity with Infosys Soft skills courseware ▪ Additional service ▪ Add-ons like Caselets, project definitions ▪ Resource augmentation	▪ Infosys trained faculty ▪ Infrastructure and resources ▪ Management support ▪ Financial budgeting ▪ Student monitoring ▪ Management review ▪ Feedback analysis
Role	▪ Relationship	▪ Training delivery	▪ Training delivery ▪ Delivery support
Measure of success	▪ Student placement index ▪ Improved attitude	▪ Session effectiveness ▪ Lowest Cost per student	▪ Placement change ▪ College attractiveness

The contact details of the Alliance Partners associated with your region can be obtained from the Infosys Campus Connect SPoC.

(f) Plan Batch (es)

If you have more than 50 student registrations, you will need to group the students into batches and plan to conduct classes for each batch separately. You may discuss with the college Management and decide on the number of students per batch and the number of batches, based on:

1. The number of students registered
2. The size of classrooms, discussion rooms

3. The availability of faculty

The minimum batch size at the end of the soft-skills training should not be less than 50. You are recommended to plan a batch with average size of 50.

(g) Select Faculty

(h) The success of soft skills program rollout will depend on effective planning by the core team members and for successful execution, core team should carefully select faculties.
The college core team may select the faculties having following demonstrable skills:

1. Passion to interact with students and engage them in creative interactions
2. Can facilitate learning through blended learning techniques
3. Can be from humanities background but know how to use computer
4. Good communication and interpersonal skills
5. Flair for writing and content generation
6. Interest to learn and apply new concepts and techniques
7. Passion for high quality standards
8. Strong sense of commitment towards the initiatives
9. Certified by Infosys or enabled by Soft Skills Alliance Partner to rollout soft skills program

For the soft skills program rollouts identify the faculty members who will be available during the rollout period. In case the assigned faculty is not available, plan for the backup faculty to ensure continuity in the course.

(i) Announce the Program

When the college Management decides to implement the Soft-Skills Program rollout, the information needs to be shared with the college students and the faculty members. The Soft-Skills training program is typically conducted for the selected students during the 3rd and/or 4th semester of the Engineering degree education. The College Core Team needs to review the following elements before announcing the Campus Connect Soft-Skills training.

Courses offered – Provides a list of courses offered by the program.

Broad schedule – Indicates the period of the program, and planned start and end dates or weeks of the month.

Benefits of taking the course – Informs the benefits of attending the program, so that students can make informed decision to attend the training courses.

Enrollment procedure – Specifies the eligibility criteria for student registrations. It helps to receive more relevant response.

Contact information – Provides the name and designation of the person who will receive responses from students.

You may choose to announce the Soft-Skills training using channels such as:

1. Display the training announcement on the college notice board
2. Update college website with the training announcement
3. In-classroom briefing of the training program by faculty members
4. Address by Head of Institution to relevant students
5. Posters on display along with contact information of the anchor

Students may have questions related to the Soft-Skills program. You may refer to the frequently asked questions bank for ready reference to answer some common questions. You could also read the Campus Connect overview section of this guide and Campus Connect collateral for further details. Infosys DC SPoC will be able to assist you if you need further clarifications.

You can use the Soft-Skills-Announcement Template provided in the Templates appendix for a printed announcement.

Refer the Frequently Asked Questions in the Appendix of this guide.

(j) Select Students

Subsequent to the formal announcement of soft skills training, many students are likely to respond with an interest to attend the training. The College Core Team may have to select the candidates using pre-defined criteria and choose the right students for the program.

Your institute can define a set of guidelines to select students for enrollment to the soft skills training. You may need to finalize the selection criteria with the college Management's consultation. Following are some criteria used by partner colleges that have rolled out the soft skills Program. You may choose some of these for evolving student selection criteria for your college:

Aptitude Test – Conduct an aptitude test and select students based on the scores.

CGPA – Calculate the Cumulative Grade Point Average for each student and select students based on the CGPA scores.

Cumulative Percentage - Consider the cumulative percentage of marks by students till the last semester.

Interview - Conduct interviews to decide upon the eligibility of the student. You can also gauge a student's interest in attending this program through an interview.

Infosys Recruitment – Select all students who were offered employment with Infosys.

The soft skills program is open for engineering students who are:

1. In the Second Year of engineering course, preferably between 3rd to 5th Semesters.
2. Studying any branch of engineering, whether IT related or non-IT related
3. Try and avoid students who have a backlog of subjects from the previous semesters.

(k) Prepare detailed Rollout Plan

A successful deployment of the Soft-Skills Program requires good planning and execution. When you begin to plan for a rollout, you need to consider some important elements like:

University Semester Schedule – Consider the semester schedule such as semester start date, last date for class lectures, start of practical examinations and start of vacation. You may also take into consideration other key activities of the institute such as cultural fests, campus recruitment, and so on that fall in the period of planned Soft-Skills deployment.

Faculty Calendar – Consider the faculty members who need to be available during the Soft-Skills rollout period. You may have to look at the staff leave calendar and back-up faculty member to ensure continuity in the event of non-availability of the assigned faculty.

Preparation Time – Consider the time required by the faculty members to prepare for the Soft-Skills course delivery before beginning the course.

Resources Availability—Check whether the required resources like classrooms, discussion rooms, projectors etc. are available during the course rollout period.

A typical Rollout Plan consists of:

1. Names of the faculty members who will deliver the training. You can also provide the experience details of the faculty.
2. Estimated effort by the faculty. The faculty effort also includes:
    a. Estimated preparation time
    b. Estimated assessment time
3. Faculty/ Alliance Partner backup. It is good to identify backup faculty to avoid unforeseen events and to enable the course continue smoothly.
4. Resources and equipment required
5. Start and end dates of the training
6. Allocated date/time of the classes - Exact schedule on weekdays and/or weekends.

See the Rollout Plan Sample provided in the Sample Plans & Reports appendix.

You may want to discuss the training schedule with the college Management before publishing it. You can also contact DC SPoC for any help needed on rollout planning.

It is suggested to have the faculty who takes the course to prepare a detailed individual course plan.

(l) Review the Rollout Plan with Infosys

When the rollout plan is ready after consulting the college Management, send the rollout plan to DC SPoC through your College SPoC. Campus Connect team reviews the plan together with alliance Partner if applicable, to ensure that the time allocated for each course is appropriate, and that your plan matches with the suggested training plan. Campus Connect team also records the rollout details from your plan. This will enable the Campus Connect team to extend any help you require in deployment.

(m) Get Resources and Course Material Ready

Ensure that the required resources like class room equipment, presentation material, lab equipment, etc. are available at the planned training venue. The course material should be made available to the students. If you have to distribute individual copies of the study material, ensure that you have sufficient copies of the same. If the students should access the course material from intranet, ensure that necessary access permissions are given to the students.

(n) Announce the Course Schedule

Announce the schedule of the program to the selected students. The announcement should cover the following points:

1. List of students selected
2. Detailed course calendar

Contact information

You can use the SS Schedule Announcement Template provided in the Templates appendix to prepare an announcement quickly.

After preparing the announcement sheet, get an approval from the college management on the same. You can then publish the course rollout as per your college practices.

Related Topics:

Rollout Plan Sample

Rollout Plan Template

SS Announcement Template

SS Schedule Announcement Template

College Core Team Reviews

College Core Team dedicated to Campus Connect program will need to meet together with alliance partner if applicable, several times during the program rollout to analyze data collected, frame issues, resolve them and commit an action plan as well as track action plan to close.

Some of the common features of a College Core Team include:

- College Core Team will need to plan and arrange to collect data or facts that will be the basis for review. Examples of such data could be –
  - *Number of students enrolled into Soft-Skills training*
  - *Student attendance below minimum threshold (Say 50 in batch of 75)*
  - *Number of students dropped-out*
  - *Average faculty hours invested in preparation, classroom lecture, contact sessions and assessment*
  - *Topics ranked as BEST and POOR by students*
  - *Improvement suggestions of faculty and students*
  - *Analysis of feedback submitted by students at the end of each course*
- The team needs to objectively consider deviations and frame issues that need attention and initiate corrective actions. Examples of such objectively framed issues are –
  - *Students are unable to meet demands of assignment and Soft-skills training program.*
  - *Faculty effort is exceeding by 18%*
  - *Student assignment score trend is decreasing from 88% to 60%*
  - *There are no good case-studies to explain "Body Languages" topic*
- It is strongly recommended that the College Core team adapts the focus discussion methodology for review and problem solving. The steps are *Context Setting, Brainstorming and Team presentation.*
- The team needs to document the minutes, findings and actions with target date, responsibility and any resource approval if needed. All actions need to be tracked to close by the College Core Team.

Pre-deployment Checklist

This checklist helps you ensure that you have completed all the pre-deployment tasks before you begin with deployment of the Soft-Skills Program.

Tick each task when complete.

1. Rollout Plan reviewed with DC SPoC and Infosys Soft-skills Alliance Partner (if applicable)
2. Detailed Batch Schedule ready
3. Faculty Identified (from your college or from Infosys-identified soft-skills alliance partners)
4. Developmental Assignments (DAs) ready
5. Students List ready
6. Facilities Allocation Confirmed
    a. Classrooms
    b. Discussion Rooms
    c. Flipcharts, Marker Pens
    d. Overhead Projectors
    e. Speaker Phones
7. Soft-Skills Program Announcement Notice/ Letter ready
8. Participant Manual for Students ready
9. Facilitator Manual for Faculty ready
10. FAQs for Student Queries ready
11. Course Syllabus Hardcopy ready
12. Campus Connect Presentation & Program Details ready

CHECKLIST

Chapter 4

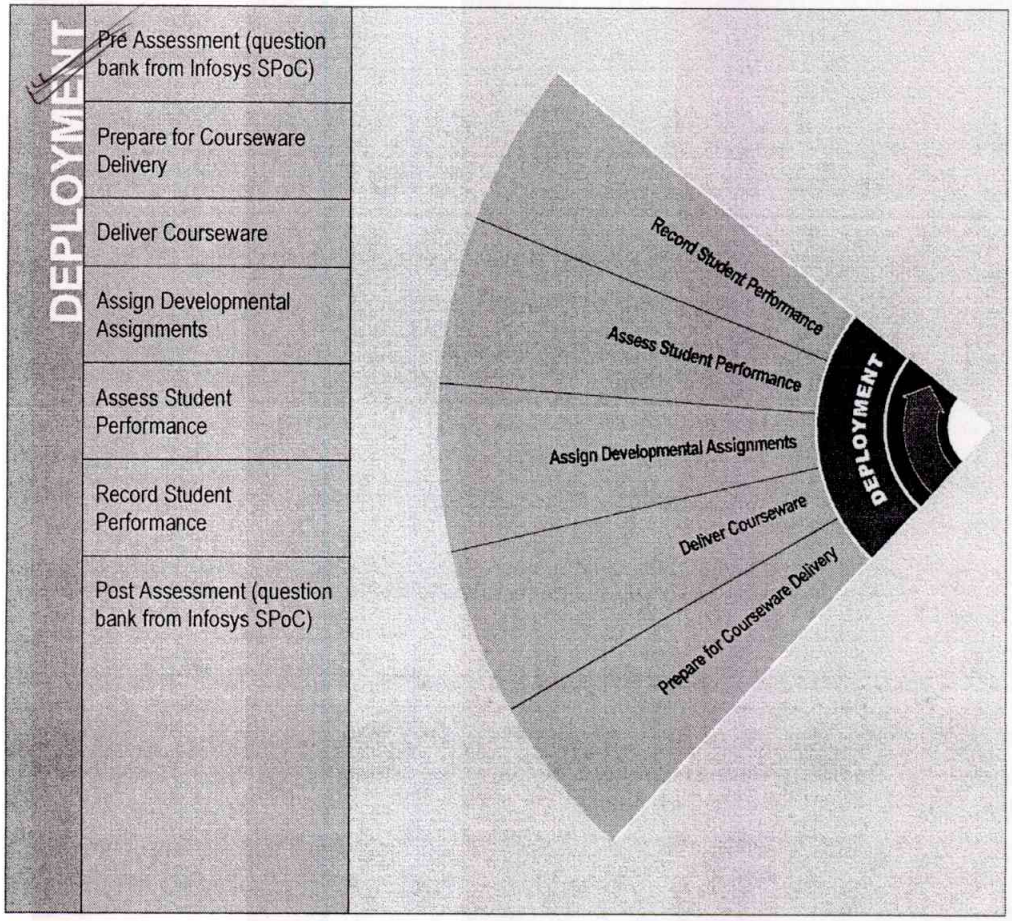
Deployment Tasks

This chapter describes the tasks involved in the process of deployment, the steps for course delivery, assigning Developmental assignments to student, performance assessment, and guides you on tracking the progress. A prerequisite for appreciating this chapter is to develop a thorough understanding of the pre-deployment tasks discussed in the previous section. This chapter also provides detailed information on the course objectives, syllabus, recommended course time distribution, assessment guidelines etc.

Use the checklist, provided at the end of the chapter, to ensure that you have completed all the steps of deployment.

Deployment Tasks

The series of deployment tasks that will guide you to successfully train a specific batch of students is given below:



The following sections detail the deployment tasks.

(a) Pre Assessment

Before the course is delivered, a pre test needs to be conducted for the students who would be attending the courseware. The question bank can be obtained from the Infosys DC SPoC

(b) Prepare for Courseware Delivery

Understand the course *design, objectives, prerequisites, syllabus, and references*. Read through the course material and be prepared for course delivery. The course objectives and syllabi are given at the end of this chapter. The course material for each of the 5 courses mainly comprises 2 key components, viz, a participant manual and a facilitator manual.

The participant manual contains the courseware and the exercises given topic-wise. This is to be used as a workbook by the student, filling in his/her understanding of a topic and solving the exercises given. This can be expanded by including more exercises in the form of case studies, quizzes and so on. This can be used to evaluate the student at the end of the course.

The facilitator manual gives a detailed account of how the course is to be conducted. This contains a detailed table-of-contents, time to be spent in each of the sub-topics, ways to introduce a topic and classroom exercises to make the class interactive in nature.

The faculty member needs to study the facilitator manual in detail for effective delivery of the course.

In order to deliver the classroom experience effectively you will need to:

1. Analyze the logical organization and grouping of sub-topics
2. Amount of time that needs to be allocated for each sub-topic
3. Questions you will ask the students to introduce a topic
4. Examples you will provide for clear understanding
5. Assignments you want different teams to complete
6. Guidelines you want the students to follow for effective learning
7. References you want to provide for further reading

See the Syllabus, Reference Material section of this chapter for syllabus and references of each course.

Access the Campus Connect Portal (http://campusconnect.infosys.com) for the courseware (Participant and Facilitator manuals) for all the 5 courses.

(c) Deliver Courseware

Once you are thorough with the subject to be delivered, follow the course schedule and deliver the topics. **Ensure that the syllabus is covered entirely, and the assignments are done by the students as per the course structure.**

During courseware delivery, you will play multiples roles such as Instructor, facilitator or assessor. The facilitator manual gives a detailed structure for each course. The recommended way to introduce the topics of the course is illustrated below.

The key elements of courseware delivery are:

1. **Context Setting** - Set the background for introducing the topic by prompting the students to respond to some fundamental questions (these questions are also provided in the facilitator manual. You can add some more).
2. **Concept Illustration** - Develop the key concepts of the subject by making the students do some small activities which are provided in the facilitator manual.
3. **Case Study** - Provide relevant case studies to the students and ask them to resolve the same and present it to the class. This can be done by grouping the students in to, say, 5 in a group or so. The participant manual contains some case studies. You may add some more so that there are enough number of case studies to work upon.
4. **Make the students Document the Learnings** - The participant manual is designed like a work-book in which the students can register their learnings, work on the case studies, note down the references and come up with an action plan for the self to improve a particular skill.

Topic: One Way Communication (Demonstrate the problems of one-way communication and introduce the concept of "Feedback")

Step 1 - Context Setting
How does communication start? <Elicit responses from students> When someone wants to say something. Let us call him the sender. This sender should have someone to listen to him. Let us call this second person the receiver. Once the sender and the receiver are identified, one-way communication can be established.

Step 2 - Concept Illustration

Invite Student Participation:

- *How effective do you think one way communication is?*
- *What is "Good communication" and what is "Effective communication"?*
- *Is there any difference between the two?*

Small Activity
A small activity to demonstrate the limitations and shortcomings of one-way communication.

Materials Required: A geometrical figure on a sheet of paper, which should not be shown or be visible to the participants.

Time required: About 10 minutes.

Procedure: Give the following instructions to the participants. Either the facilitator can do the dictation, or use a volunteer for the activity.

- I shall be dictating a geometrical figure to you.
- I shall repeat each sentence twice.
- You cannot ask me any questions or clarifications; just draw the diagram as I dictate it. (Start and end dictation)
- Now how many persons got that right? (Show them the original diagram)

Debrief: Why has your drawing deviated from mine? (Get responses like lack of clarification, no questioning etc.)

But what do you think was the main problem? Is dictating the best way to reproduce a geometrical figure? What should I have done? Either hang it up, or project it on a screen.

Develop the concept

Ask the students about "Feedback", what is it, what is the need for it in communication and so on to build the subject.

First, you will need to understand logical segmentation of each course. Develop and note questions to trigger thinking among students. Record analogies, metaphors that make them understand concepts by compare and contrast. Have the assignment questions ready.

Step 3 - Case Study
Provide situations to illustrate the need for feedback, active listening etc. Split the students in groups. They can work in groups. After resolving the case, they can present their solutions and then discuss.

Step 4 - Make the students Document the Learnings
Encourage students to document learning/ references, best practices in the participant manual, including: 1. Date, Topic, Faculty references 2. Key points to remember 3. Books, website references 4. Action plan for further practice or assignment completion date 5. Questions/ topics that need further deliberation 6. Students conduct peer review of key findings and notes.

Audit student workbooks periodically to assess quality of comments, note making skills.

Please call for College Core Team Review if you have sufficient data that needs to be discussed and corrective actions need to be taken to improve the situation.

(d) Assign Developmental Assignments (DAs)

Once the course delivery is completed for all the 5 modules, **each student needs to work on 3 Developmental Assignments**. A detailed DA Guide is available for reference. The concept behind Developmental Assignments is to reinforce skill practice as well as achieve change in exhibited behaviour. The facilitator first assign the DAs to each of the students and plan for periodic review on the progress of the DAs.

From the facilitator's perspective, Developmental Assignments provide an avenue for following through on the action plans that participants may have drawn up thus making learning more long term and meaningful. From the participant's perspective, the Developmental Assignment provide an opportunity to test the new skills and concepts he/she has learnt during training sessions.

The faculty and students need not restrict themselves to DAs available in the Guide but can build their own Assignments to continue the learning journey. However they must determine the following and secure prior approval from the Campus Connect SPOC.

- Specific Learning from the DA
- Assessment criteria they will employ to grade the DA

Grading the Developmental Assignments

The DAs can be graded by **Individual Review Process** or **Group Review Process**, the details of which have been provided in the DA Guide.

Students are graded on a 5-point performance evaluation scale, which states the level of competency the student displays.

Grade	Grade Interpretation
A+	Performance on the DA is exceptional & exceeds expectations. All the competency behavioral indicators are well displayed.
A	Performance on the DA is good. Clearly meets the competency behavioral indicators
B+	Performance on the DA is satisfactory. Just about meets the competency behavioral indicators.
B	Performance on the DA is below average; needs improvement. Is able to satisfy only a few competency behavioral indicators.
C	Performance on the DA is fair / unsatisfactory. Is unable to satisfy the competency behavioral indicators.

Sampling Report-Developmental Assignment

To give an insight into the DA enabled learning journey of the students a Sampling Report emphasizing representativeness will need to be prepared and submitted by the faculty.

- The sample should ensure all DA's are represented

  Sample size must be 10-15% of the population. The Sampling report should record:

  1. The DA Process – student engagement (what worked well/did not work so well)
  2. DA Quality – highlights
  3. Suggestions for enhancing this learning experience

Ensure that all students select and complete The Developmental Assignments. Help students focus on the topic. Organize for Individual/ Group Review Process.

Assess student presentations and record grades. Provide feedback on common Dos and Don'ts.

(e) Student Counselling

Counselling is required to make sure that the students are in the correct learning path and there is no digression from the end goal. They may be requiring some mentoring and inputs to make an action plan going forward. **This is for the students from under privileged backgrounds or those who are not very proficient in life skills and are in need for individual guidance to make them come up to the level of their peer.** They require constructive feedback and a plan which they can follow for improving their skills.

They require help of both a Mentor and a Coach to help them shape up. For clarification, the role of a Mentor and a Coach is briefly described below:

1. ***Mentor*** – The areas where a Mentor focuses are:
    a. Shaping the overall personality of a student.
    b. Act as a role model
    c. Provide valuable and constructive feedback
    d. Identify strengths and weakness of each student
    e. Help students identify individual goals
    f. Assist but not control
    g. Provide the alternatives but not the solution

2. ***Coach*** – A Coach on the other hand, emphasises on:
    a. Developing interpersonal skills of a student.
    b. Be closely associated with each student and understand his personality
    c. Help them stretch out their limit and excel.
    d. Make each student an achiever.
    e. Make students goal oriented
    f. Gauges his own effectiveness and improves himself
    g. Be Supportive, patient and flexible for his students
    h. Be a team player and trusted by his students

In addition to the above, there may be many queries students may have related to the Soft Skills Program and Campus Connect initiative.

You may refer to the frequently asked questions bank for ready reference on answers to some common questions. Infosys DC SPoC will be able to assist you if you need further clarifications.

Refer the Frequently Asked Questions topic in this chapter.

(f) Assess Student Performance

During the roll out of the 40 hours of training sessions faculty may administer pre and post tests at the start and end of each individual module. These are non-gradable tests used just to help faculty assess the assimilation of concepts by students.

After the rollout of the 40 hours it is recommended that a **Comprehensive Post Test** is administered online to the students.

Article II. Syllabus, Reference Material

The syllabus and time allocation for the sub-topics for the 5 courses are given in this section. The corresponding reference materials (books/ websites) are also given.

The course material (participant and facilitator manuals) is available on the Campus Connect portal (http://campusconnect.infosys.com) as pdf files for download.

Business Communication Skills (BCS)

This course provides the participants with information, and equips them with the requisite skills to make their communication effective.

Course Objectives

Sl. No.	Objective	Demonstrable knowledge / skills
1	**Gain a functional understanding of basic English grammar**	**Ability to understand basic English grammar and be able to use it correctly in daily interactions**
2	**Practice language skills to eliminate errors in pronunciation and sentence construction**	**Ability to construct sentences and practice it in daily interactions**
3	**Understand and enhance interpersonal communication process**	**Ability to understand and enhance communication process**
4.	**To introduce the fundamentals of communication.**	**Ability to understand major components of communication and difference between good communication and effective communication.**
5.	**To introduce role of body language in communication.**	**Ability to visualize the importance of non-verbal behavior interpretation during communication.**
6.	**How should we listen to people? – Importance of active listening.**	**Ability to understand the speaker's thoughts and feeling while listening and paraphrasing him.**

Sources

1. The Seven Habits of Highly Effective People - Stephen R. Covey.
2. Who Moved My Cheese - Dr. Spenser Johnson.
3. Seven Spiritual Laws of Success - Deepak Chopra.
4. I'm OK You are OK – Erric Seghal

Intrapersonal and Interpersonal Relationship Skills (IRS)

This course provides the participants with information, and equips them with the requisite skills to enable them to deal with feelings, understand assertiveness, develop self-confidence, and work in teams.

Course Objectives

Sl. No.	Objective	Demonstrable knowledge / skills
1	**Understand the importance of and the various skills involved in developing enriching interpersonal relationships**	Ability to understand the importance of interpersonal skills and develop enriching skills while communicating
2	**Be more aware of his / her own self – confidence, values**	Ability to display self confidence in day to day interactions
3	**Understand and handle emotions of self and others**	Ability to understand emotions and feelings of self and others
4	**Understand the necessity and importance of working together as a team**	Ability to work in teams
5	**Learn how to go about being a good team player and form an effective team**	Ability to become an effective team player and work towards a common goal
6	**Have put their team building skills to test in the various activities to understand where they stand and improve themselves with each succeeding activity.**	Ability to check individuals performance in a team

Sources

1. Emotional Intelligence - David Goleman
2. Working with Emotional Intelligence - David Goleman.
3. Good To Great - Jim Collins
4. Goal - Eliyahu Goldratt.
5. Only the Paranoid Survive - Andrew Grove
6. All the books in the "Chicken Soup for the Soul" series.

Campus to Company (C2C)

This course assists the participants in understanding the nuances of Corporate Grooming and Dressing, Corporate Etiquette, and the Ethical dilemmas present in business.

Course Objectives

Sl. No.	Objective	Demonstrable knowledge / skills
1.	**Understand what constitutes proper grooming and etiquette in a professional environment**	Knowledge of how to dress, how to behave and how to take decisions in corporate environment
2.	**Have some practical tips to handle himself / herself in a given professional setting**	Ability to understand how to dress and behave in a professional set up
3.	**Have practiced the skills necessary to demonstrate a comfort level in executing the same**	Ability to follow and execute the code of conduct in a professional environment

Sources

1. EatiQuette''s The Main Course on Dining Etiquette"": A step-by-step guide to dining with confidence in the 21st Century, by David Rothschild
2. "The Complete Idiot''s Guide to Etiquette" by Mary Mitchell – Published by Alpha Books
3. "Strategic interviewing" by Richaurd Camp, Mary E. Vielhaber and Jack L. Simonetti – Published by Wiley India Pvt. ltd

Group Discussions, Interviews and Presentations (GIP)

This course assist the participants in understanding the basics underlying group discussions, the group decision – making process, how to make presentations, and how to handle interview situations.

Course Objectives

Sl. No.	Objective	Demonstrable knowledge / skills
	Understand the skills tested and participate effectively in Group Discussions.	Ability to understand difference between structured and unstructured group discussion. Knowledge to use these techniques in right context.
	Appreciate the nuances of the Group Decision-making process	Knowledge of activity that how groups take decisions and various strategies for improving group decisions.
	Learn the basics of how to make an effective presentation and have numerous practice presentations in small groups and larger audiences.	Ability to understand the importance of initial planning, preparation, outlining, practice and last minute task to make an effective presentation
	Attend any type of interview with confidence borne out of knowledge gained and practice sessions.	Ability to handle interview situations and create a good impression on the interviewer

Sources

1. "Effective Group Discussion: Theory and Practice" by Gloria J. Galanes, Katherine Adams , John K. Brilhart
2. "Effective Presentation", 3rd Edition by Ros Jay, Antony Jay published by Pearson
3. Effective Presentation Skills (A Fifty-Minute Series Book) by Steve Mandel

Entrepreneurial Skills Development (ESD)

This course assists the participants in setting specific measurable goals for themselves in their professional and /or professional life.

Course Objectives

Sl. No.	Objective	Demonstrable knowledge / skills
1.	**Set specific measurable goals for themselves in their personal and/or professional life**	Ability to set specific measurable goals and create plans to achieve the same
2.	**Understand the skills and the intricacies involved in starting an entrepreneurial venture**	Ability to practice individual goal setting exercise and practice these skills to set up an entrepreneurial venture

Sources

1. Even Eagles need a push – by David McNally

Deployment Checklist

This checklist helps you ensure you have completed all the deployment tasks, before you begin with post-deployment activities of the Soft-Skills Program.

Tick each task when complete.

- Batch specific Student Teams List
- Course Specific Questions for student interaction during courseware delivery
- Brainstorming case studies
- Developmental Assignments Faculty Effort Record
- Student Score Report
- Students Attendance Record

CHECKLIST

Chapter 5

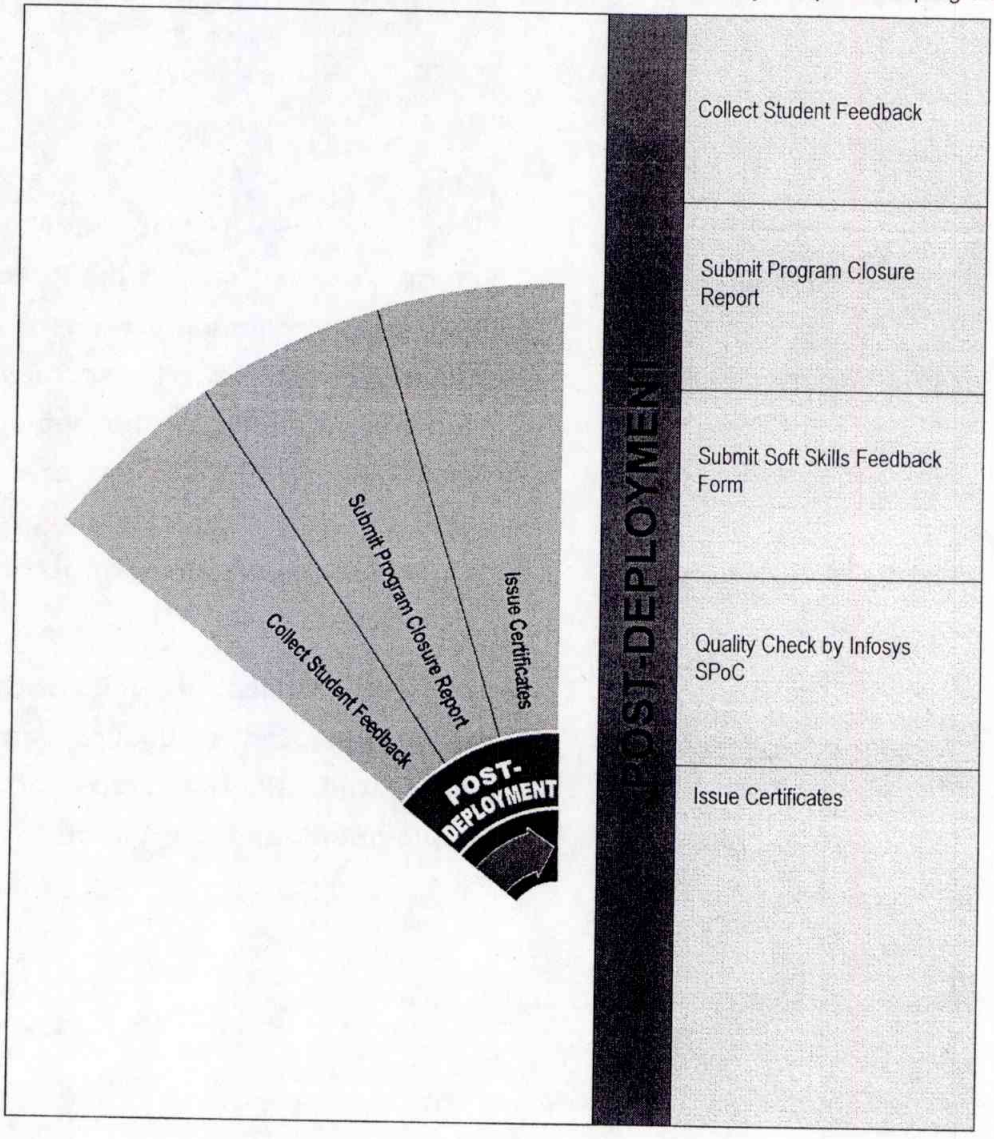
Post- Deployment Tasks

This chapter describes the tasks involved in the post-deployment stage such as submitting feedback, course completion reports, and certificates issue. It assumes that you have completed the deployment tasks before beginning the post-deployment. It also provides guidelines necessary to accomplish certain tasks.

Use the checklist, provided at the end of the chapter, to ensure you have completed all the steps of post-deployment, and the rollout.

Post-deployment Tasks

The series of post-deployment tasks that will guide you to successfully complete the program:



The following sections detail the post-deployment tasks.

(a) Collect Feedback from Students

Students are the best source to assess the effectiveness of the program. Their feedback will help improve the program. Distribute feedback forms to students and gather their opinion. You can use the Student Feedback Form available in this guide or prepare one on your own as per your college practice.

You need not send the feedback forms to DC SPoC. However, if you notice certain points that should be **passed on to the Campus Connect team, you can do so by writing those comments in *Soft-Skills Improvement Feedback* form and mailing to DC SPoC.**

See the Student Feedback Form provided in the Templates appendix.

It is suggested that the College Core Team reviews the student feedback as well as discuss suggestions, issues from faculty members as well as defines an action plan with timelines.

(b) Present a Report on Program Completion

On completion of **all the courses** (classes, contact sessions, assessment completed), present a report to your College Management. Share your experiences in rolling out the Soft-Skills training. Typically, the College Management would be interested in knowing the following details from you:

- Total number of students enrolled and attended the program (% Dropout)
- Number of batches and number of students in each batch
- Student selection criteria used
- Resources provided by Campus Connect team to facilitate the program
- Resources used to rollout the program
- Effort spent by the faculty (Preparation, Classroom, Contact Sessions and Assessment)
- Benefits (tangible or in-tangible) perceived because of the Soft-Skills Program rollout
- Issues faced during the rollout and how you resolved
- Students' scores analysis, for example, how many students scored a rating of above 4 (out of 5) , Batch toppers and % students securing low scores, % students eligible for Campus Connect certificate etc

(c) Submit Soft-Skills Feedback Form

The Campus Connect team will be keen to analyze the overall Soft-Skills Program rollout events, performance and process improvement areas. Prepare the feedback form, review and share with DC SPoC. Do include assistance you may need in future, strengths and weaknesses of the current processes and your suggestions for improvement.

See the Soft-Skills Improvement Feedback Form provided in the Templates appendix.

(d) Submit Program Closure Report

The progress report of the program, as maintained during the course of the program, needs to be submitted to the Infosys SPoC. The main elements of this report are:

1. Basic details like college name, soft-skills program anchor etc
2. Batch start date, end date, 40 hours spent in classroom training.
3. Faculty effort information
4. Faculty contact information (email, phone)
5. Student scores for the Comprehensive Post Test (CPA)
6. Developmental Assessments Grades
7. DA Sampling Report

The template for the closure report is given in the Templates section of this guide.

(e) Quality Checks by Infosys SPoC

After the closure report is submitted to the Infosys SPoC, a quality check will be conducted by the Infosys SPoC at a mutually convenient time.

(f) Issue Certificates

Every student who fully attends ALL the Soft-Skills courses will be issued a certificate. On receiving the closure report from the partner college, the Campus Connect team verifies the data and processes certificate issue and incentive disbursement. The incentive is not applicable if the training program has been conducted entirely by the Alliance Partner. Campus Connect team identifies the number of students who should receive certificates from the data you provide in the Closure Report.

Campus Connect provides you the certificates with unique identification numbers. You will have to follow the guidelines for issuing student certificates and print the relevant information such as name of the student, roll number, ratings scored, etc., on the certificates. The certificates should be signed by the authorized signatory of the partner college or the institute before distribution.

Related Topics:

Student Feedback Form

Soft-Skills Improvement Feedback Form

Guidelines for Issuing Student Certificates

These guidelines are meant for the college (Head of the institute, College point-of-contact, core team) for preparing and issuing the certificates to eligible students on the completion of the Infosys Campus Connect training program. Please read all the guidelines carefully.

1. General
    1. Please note that you have received the following
        i. Cover letter
        ii. Certificates and jackets for the certificates
        iii. Eligible students list
    2. The certificates will be given to the college once the college single point-of-contact, in concurrence with Head of the institute, formally declares the completion of the training program through a letter/email to Infosys SPOC.
    3. The complete list of students and their scores, who have undergone the training program, have to be reviewed and authorized by the college point-of-contact / core-team.
    4. The complete list of students, who have undergone the training program, will be shared by the college to Infosys SPOC (as part of the closure report)
    5. The certificates will be arranged by Infosys to the college. Each certificate will have a PIN code mapped to the student in the college.
    6. The college name would already be printed in the front page of the certificate.
    7. The certificate will be issued to the students in an event organized by the college. Recognize and reward the top 5 performers in the batch with the prizes provided.
    8. The certificate will be issued to only those students who have completed all the courses and successfully completed the assessment.
    9. On the bottom right part of the certificate, the certificate will have a PIN code.
    10. For further information, please contact your Infosys SPOC.

    Return the damaged certificates by post to the Infosys SPOC for inventory control and management. Please arrange an email to Infosys SPOC within two weeks of receiving the certificates about the following:

    (a) Total no. of certificates received = << >>

    (b) No. of certificates distributed = << >>

    (c) No. of certificates damaged= << >>

    (d) No. of certificates retained with college= << >>

    Note a = b + c + d

> ★ **Extreme care is taken by the partner college while administering and issuing the certificates.**

GUIDELINES

Post-Deployment Checklist

This checklist helps you ensure you have completed all the post-deployment tasks to wind up the Soft-Skills Program.

Tick each task when complete.

- Feedback from Students
- Soft-Skills Closure Report
- Soft-Skills Improvement Feedback
- Certificates Receipt
- Certificates Preparation
- Certificates/ Prize Distribution

CHECKLIST

Appendix A

Glossary

This appendix contains a brief description of certain terms related to Campus Connect program. This section can be used in conjunction with the Abbreviations and Acronyms topic to get familiar with commonly used terms in the context of Campus Connect program.

Glossary

BCS

Business Communication Skills (BCS) is one of the Soft-Skills Program courses.

IRS

Intrapersonal and Interpersonal Relationship Skills (IRS) is one of the Soft-Skills Program courses.

C2C

Campus to Company (C2C) is one of the Soft-Skills Program courses.

GIP

Group Discussions, Interviews and Presentations (GIP) is one of the Soft-Skills Program courses.

ESD

Entrepreneurial Skills Development (ESD) is one of the Soft-Skills Program courses.

SS

Soft Skills (SS) is an education and training program for the students of Partner College, consisting five courses.

DC

Development Center (DC) indicates the various developing centers of Infosys.

E&R

Education and Research (E&R) is one of the departments of Infosys.

AP

Alliance Partner (AP) is an Infosys certified Soft-Skills trainer which can help the Campus Connect partner colleges roll out the Soft-Skills program by assisting them at various levels as required by the college.

Soft Skills Workshop

Soft Skills Workshop (SS Workshops) is a three day residential program at one of the Infosys DC which provides a walkthrough of the Soft-Skills courseware and the delivery methodology.

Participant Manual

This manual is designed to help the target audience record their observations, learning, discussions and key takeaways from the Soft-Skills workshop and refer to them when required.

Facilitator Manual

This manual is designed to help the faculty members record their observations, learning, discussions and key takeaways from the roll out of the Soft-Skills at their institutes and refer to them when required.

Case Study

Case study refers to a scenario/situation definition which the participant understands and suggests a solution for the same.

Developmental Assignment

Developmental Assignment refers to the project undertaken to strengthen specific skill set or piece of knowledge absorbed during training.

Assessment

Assessment is the rating given to each Soft-Skills roll out participant based on his/her performance in the practice sessions.

IP

Intellectual Property

MOU

Memorandum of Understanding (MOU) is an agreement signed by Infosys and the partner college regarding rollout of Campus Connect initiative.

NDA

Non Disclosure Agreement (NDA) is an agreement between Infosys and the partner college to protect IP and confidential information.

Partner College

The college or education institute that has signed a partner agreement to implement the Campus Connect programs at the college for mutual benefit.

SPOC

Single Point of Contact (SPoC) is the person (either at a partner college or at a DC) who represents the college or company for all communications.

Appendix B

Campus Connect Overview

This appendix contains a brief description of the Campus Connect program and the associated offerings.

About Campus Connect

Campus Connect is an industry-academia collaboration program to align engineering students' skills with industry needs. Infosys, in this program shares with academia its mature technological and life skills training methods, courseware, student project samples and other learning resources that have been developed, practiced and perfected over the last 15 years.

The Campus Connect program has several sub-components weaved together to create synergy for effective, fast-paced learning. Currently the program includes – Conclave, Road Show, Faculty Enablement Program (FEP), Industrial Visits, Sabbatical Projects, Foundation Program, Student Projects, Seminars, Deep-dive technical workshops, Sponsorships, and Soft Skills Program.

Following is a brief description of each of the Campus Connect programs.

(a) Conclave

The Conclave event brings together the leading engineering colleges' management contacts under one roof to discuss the need and actions for industry-academia collaboration. A large percentage of colleges get to know about Campus Connect, commit to collaborate with Campus Connect, and implement Campus Connect programs at their colleges.

Conclave is a 3-day event hosted and managed by the Campus Connect team. It works as a socializing and networking event for the college management and alumni. Topics covered include – Address by Infosys management, Infosys background presentations, Ideal industry-academia relationship, Current realities of industry and institutions, Campus Connect offerings, MOU review, College specific action planning, and Familiarization with the Campus Connect portal.

At the end of the program, there will be a formal communication of the MOU, Point-of-contacts at the partner college and at the nearest DC, core team at the partner college, and action plans by the team leads.

(b) Road Show

Road Shows are conducted to communicate the value and benefits of the Campus Connect program to the partner colleges' faculty and students. Campus Connect publicity material is displayed in the colleges. Students and faculty learn about the Campus Connect web portal.

The Campus Connect Road Show is a half-day event organized by the Campus Connect team at the partner college campus. The Campus Connect team gives presentations to the faculty and students. The college management addresses the students and makes announcements, if any, on rollout of the Campus Connect programs.

(c) Faculty Enablement Program

Faculty Enablement Program (FEP) is open to the faculties of Campus Connect partnering engineering colleges. The faculties of various engineering colleges are invited to spend two weeks in the Infosys campus. Here they learn about the Foundation Program, the best practices of Infosys training, listening to what IT industry leads has to say, working out a rollout plan for FP, socializing and networking with other college members and alumni. The participants are honored with certificates. By the end of the program, the faculties are expected to come up with an FP rollout plan.

(d) Industrial Visits

Industrial Visits allow the students to personally look at how the IT enterprises work. It demystifies the image that students would have on the functioning of IT business enterprises. A group of nearly 100 students from different disciplines of engineering education along with the faculty members visit Infosys DC and spend 3 – 6 hours. They get to know about the company, observe the IT services delivery environment, the corporate work culture, services offered to global customers and learn about leading edge technologies through short lectures.

(e) Sabbatical Projects

Sabbatical Projects are offered for the faculties of Campus Connect partnering engineering colleges in different verticals of the IT industry. Faculties get an opportunity to leverage their leading-edge technology knowledge to develop state-of-the-art industry solutions.

The faculty works on a sabbatical project for 2-3 months, full-time, out of an Infosys DC, and delivers an IT solution or approach that has a significant cost saving or performance improvement; or enhanced solution usability.

The project requirements and the expectations are well defined at the beginning of the project and the faculty signs an NDA. Campus Connect sponsors the expenses incurred by the faculty towards execution of the project, including travel and stay.

The opportunities for sabbatical projects are generated on need-basis and are limited to 1 or 2 per college per annum.

(f) Foundation Program

Foundation Program is the key component of Campus Connect initiative. It represents Infosys' Intellectual Property and experience in training thousands of entry-level engineers from heterogeneous backgrounds and disciplines to deliver world-class projects to global customers. The purpose of FP Courseware is to provide a unique set of teaching aids, and consolidated training material to the college faculty to help them make students 'Industry Ready'.

The Foundation Program at Infosys consists of generic courses and stream specific courses. Campus Connect brings the generic courses to the colleges for the benefit of students learning advanced courses through professional training methods.

The FP courseware is typically delivered as nearly 80-130 hours of classroom sessions and extensive hands-on exercises and quizzes.

(g) Student Projects Bank

A Student Projects bank is maintained on the Campus Connect portal so that students in the final year of engineering can choose a project to take up for the final semester, learn the typical process of project execution, and use the templates and guidelines to plan and execute any project of their choice. The project details are available in three documents - *Project Document* that describes the project requirements and specifications, *Student Kit* that provides guidelines, and *Faculty Kit* that provides validation inputs. The Faculty Kit is not available for students.

The projects provided are near real-life projects and cover a wide variety of subjects including eBusiness, IT Infrastructure and industry applications. The project bank is periodically updated to include new projects.

(h) Seminars

Seminars are organized by the Campus Connect team on technical subjects as well as soft skills at the partner colleges. Professionals from Infosys visit the college and talk on a given cutting-edge technology or an essential Soft-Skills.

Technical seminars create awareness among the students about the use of IT in different industries. The expected outcome of the seminars is a measurable increase in the ability of students to relate IT concepts to IT usage in business. The faculty is also informed about the latest developments in the area of IT usage.

Seminars on soft skills educate the students on work culture in the IT corporate industry, importance of grooming inter-personal and communication skills. Topics like 'How to prepare for an interview' are also discussed.

(i) Sponsorships

Campus Connect sponsors certain events, paper presentations, quizzes, etc to encourage faculty and/or students to enhance the learning in the field of computer science or IT. The goal of sponsorships is to improve the commitment of faculty, students and college to continue applied research and utilize the knowledge in solving business problems.

Sponsorship depends on the need and type of the event. If the faculty's and/or students' research paper is selected for presentation in a forthcoming reputed conference or industry forum, financial assistance is provided. Prizes are sponsored for certain events like quizzes. The discretion on the type of sponsorship and the budget lies with Campus Connect.

(j) Soft Skills Program

Soft Skills program involves workshop type of training given to the students and/or faculty, aimed at improving communication skills, inter-personal skills, teamwork etc. Soft skills are essential for an individual to grow in a corporate environment where they have to interact with global customers. These programs are delivered through alliance partners and are paid programs.

For further details on the Campus Connect initiative, please get in touch with a Campus Connect contact person. See Directory of CC Program Contacts section of this guide for a list of Campus Connect contacts.

Appendix C

FAQs

This appendix contains the frequently asked questions about the soft-skills program and their answers. This will be very helpful in answering the queries from the students.

Frequently Asked Questions

The following are some typical questions asked by the students, along with the relevant answers.

***Q1**. What is covered in the Campus Connect Soft Skills Program?*

Answer: In the Campus Connect soft skills program following 5 modules are covered presently:

1. Business Communication Skills
2. Intrapersonal and Interpersonal Relationship Skills
3. Campus to Company
4. Group Discussions, Interviews and Presentations
5. Entrepreneurial Skills Development

These will be enhanced over time.

***Q2.** Does attending this program entitle the student for placement in Infosys?*

Answer: No. Infosys placements are decided through the regular recruitment process

***Q3.** What are the eligibility criteria to attend this program?*

Answer: The program is aimed at the second year of engineering students, preferably between 3rd to 5th Semesters. The exact eligibility criteria to select students for the program are decided by the partner college.

***Q4.** Is the program open for students of non-IT engineering branches?*

Answer: Yes. Students from IT-related as well as non-IT-related branches can attend this program.

***Q5.** Is it recommended for all the Infosys selected students to attend this program?*

Answer: Yes.

***Q6.** If a student who is yet to be placed attends this program, is it compulsory for the student to join Infosys?*

Answer: No. There is no such restriction.

***Q7.** Can students who are not selected by Infosys attend the program?*

Answer: Yes. They can attend the program.

***Q8.** Do additional sign-on bonus amount is paid for soft skills program when the student joins Infosys?*

Answer: No. For soft skills program no additional sign-on bonus amount is paid when the student joins Infosys.

***Q9.** What if an Infosys selected student does not clear the comprehensive assessment after joining Infosys?*

Answer: The comprehensive assessment is not applicable for soft-skills courses.

***Q10.** What are the benefits for students to attend the program?*

Answer: Soft skills are very essential for fresh engineering graduate to be 'Industry Ready'. In Campus Connect soft skills program, students

learn and practice industry-oriented soft skills course, and receive a certificate after completion of the course. These courses are designed to help students play their role effectively when they join the industry.

Q11. *How long will the duration of soft skills training program for students?*

Answer: Soft skills training program incorporates 40 hours of classroom training and 3 Developmental Assignments to be completed within 4 months. A lot of time needs to be spent in practicing the modules in the day-to-day life.

Q12. *What is the recommended window for rolling out this soft skills program?*

Answer: Recommended window for rolling out this program is between 3rd and 5th Semesters, ie, the program should start no earlier than 3rd and finish no later than 5th semesters.

Q13. *What is the role of soft skills alliance partner?*

Answer: Alliance partner can be involved in college faculty training or soft skills course delivery. All these are paid services delivered by the alliance partner and college will enter into contract with the alliance partner based on mutually agreed commercial terms before the beginning of the rollout.

Q14. *Will the student receive a certificate for attending the program?*

Answer: Yes. Students will receive participation certificate from Infosys.

Q15. *How is the faculty enabled on Soft Skills?*

Answer Faculty can be enabled by attending Infosys Soft-Skills workshop or by taking help on Infosys soft skills alliance partner or Infosys certified college faculty.

F A Q S

Appendix D

Templates

This appendix contains templates of plans, reports, letters, and feedback forms useful for soft skills Program rollout.

Soft-Skills Program Announcement Template

<College Name and Location>

We hereby announce commencement of Campus Connect Soft-Skills Program from _____ to _____.

Courses offered…

The Soft-Skills Program consists of the following courses:

1. Business Communication Skills
2. Intrapersonal and Interpersonal Relationship Skills
3. Campus to Company
4. Group Discussions, Interviews and Presentations
5. Entrepreneurial Skills Development

Eligibility criteria…

Students who are in **3rd to 5th Semesters** of engineering (any branch, whether IT related or non-IT related) can attend this program.

The College will select the students based on

------<Criteria>----------

-------<Criteria>----------

Registration….

The students are requested to enroll themselves for the course on or before _____. No student will be entertained after the last date of enrolment.

Please contact _____ for registrations.

Soft-Skills Program Schedule Announcement Template

See attachment for a list of students selected for the Soft-Skills Program.

This is to inform all the students who have been selected for the Soft-Skills Program that the Program is scheduled from _____ to _____.

See attachment for a detailed schedule of the courses offered.

For any queries please contact _____

Campus Connect Soft-Skills Program Rollout Plan Template

Campus Connect Soft Skills Program Rollout Template	
College Name	
Address	
City & State	

Program Overview	
Total no. of batches	
Total no.of students	
Fee charged per student	

Alliance Partner Involvement	
Name & Contact	
Nature of Involvement	
Hours of Involvement	

Detailed Plan for each Student Batch					
Batch No.					
Batch Size					
Semester					
Start Date					
End Date					
		Course Name	Date of Coverage	Hours per Day	Facilitator/Alliance Partner
	1				
	2				
	3				
	4				
	5				
Add more rows if required		**Total (min 40 hrs)**		**0**	
		Developmental Assignments & Comprehensive Post Test	**Date of Coverage**	**Hours per Day**	**Facilitator/Alliance Partner**
	1	DA Allocation			
	2	DA Support&Supervision			
	3	DA Assessment			
	4	Comprehensive Post Test			
	5	Feedback&Interview			
Add more rows if required		**Total (max 60 hrs)**		**0**	

Detailed Plan for each Student Batch	
Batch No.	
Batch Size	
Semester	
Start Date	
End Date	

Program Contacts	Name	Department/Designation	E-mail ID	Phone No.
Campus Connect SPoC				
Soft Skills Program Anchor				

Faculty Identified for Program Roll-out			
Name	Designation	Qualification	Experience

Add more rows if required

Detailed Plan for Faculty Enablement				
Start Date				
End Date				
No of faculty				
	Course Name	Date of Coverage	Hours per Day	Facilitator

Add more rows if required

Roll out plan Readiness Checklist		
Checklist Item	Yes/No	Remarks
Infrastructure availability (classroom, projector, audio system etc)		
Courseware availability on college intranet		
Student registered on Campus Connect Portal		
Faculty/Core team members registered on Campus Connect Portal		
Plans to generate Development Assignments		
Sign off agreement		

List of additional refernce book and videos		
Sr. No	Title	Author/Artist

Closure Report Template

Soft-Skills Rollout - Closure Report		
Note: This closure report has to be sent for each batch seperately by the college SPOC or a designated person		
Item	**Details**	**Remarks**
College Name		
College Address, City, State		
Name of the authorized signatory (for certificate)		
Title/Role of the authorized signatory		
Cheque/DD favouring (Name)		
Cheque/DD payable at (Location)		
Comments from Infy SPOC (Mandatory)		
Batch Details		
Program Start Date		
Program End Date		
Batch Number		
Batch Size		
Total hours of course delivery		
Total hours of DA		
Students charged for attending the program (Yes/No)		Specify the amount in case the students were charged
Rollout Plans reviewed by Infosys (y/n)		
Alliance Partner Details If Involved		

	Faculty Name	Department	Course Handled	No. of hours	Remarks
1					
2					
3					
4					
5					
	Add more rows if required				
	Alliance Partner Details (If Involved)	**Organization**	**Course Handled**	**No. of hours**	**Remarks**

Add more rows if required

	Student Details					Developmental Assignments Grades									
No.	Student Name	Student Roll No.	Gender (M/F)	Current Semester	Branch of Study	DA - 1	DA - 2	DA - 3	DA - 4	DA - 5	Eligible for Certificate? (Yes/No)	Recruited at Infy (Yes/No)	Date of Joining Infy (if recruited)	Remarks	PIN
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

Sampling of Developmental Assignments				
No.	Name of DA	Focus Area of the DA	No. of students taking the DA	Percentage of students taking the DA

Add more rows if required

Observations				
No.	Sample DA (randomly selected 10% of total DAs)	DA Processes (Student Engagement)	DA Quality Highlights	Suggestions for Improvement

Student Feedback Form

Please provide feedback on the Soft-Skills course you have attended.

Course Name :

Month & Year of attending :

College :

Student Name (Optional) :

Provide rating on a scale of 1 to 5 where:

1 – Poor **2 – Satisfactory** **3 – Good** **4 – Very Good** **5 – Excellent**

If you find any of the questions incomplete, feel free to provide your comments in the last section.

How is the quality of the course material provided for the training?	
Syllabus	
Course Content	
Case-studies	
Projects	

How effective is the course delivery?	
Classroom sessions	
Case-studies & Role plays	
Activities & Games	
Developmental Assignments	

How do you rate the resources used for training?	
Classroom Equipment	
Discussion Room Equipment	
Course Material	
Reference Books	
Reference websites	

Campus Connect portal provides features that assist you in learning. Rate the usefulness of the following features available on the portal:	
Soft-Skills Courseware	
Skill Up	
News and Events	
Alumni Connection	

What information would you like to receive periodically from Campus Connect that will help you in your learning?			
	Yes / No / Notify	Frequency	Mode
Technology Updates			
List of useful websites			
New Campus Connect Initiatives			

Would you recommend this course to other students? Yes / No

Other Comments:

Soft-Skills Improvement Feedback Form - To be filled in by the Faculty

Staying in-touch with Faculty

Campus Connect team continuously looks into ways of improving the program based on your feedback. Please take few moments to deliberate on the following topics and provide your suggestions. We value your suggestions and will strive to incorporate in our future releases. Use addition sheet if needed.

Name	:	**Designation & Department**	:
College	:		
Address	:		
Telephone	:	**Facsimile**	:
Email Address	:	**Website**	:

Provide rating on a scale of 1 to 5 where:

1 – Poor **2 – Satisfactory** **3 – Good** **4 – Very Good** **5 – Excellent**

If you find any of the questions incomplete, feel free to provide your comments in the last section.

The deployment guide provides you guidance on Soft-Skills Courses rollout. How do you rate the guide in terms of:	
Usefulness of the document	
Accuracy of content	
Completeness of content	
Language	
Layout and design	

How were your interactions with the DC Contacts in terms of:	
Providing relevant information	
Guidance	
Responsiveness	

How effective is the program?	
Students' knowledge improvement	
Networking with other colleges	
Campus recruitments	

How do you rate the course material provided for the training?	
Syllabus	
Course Content	
Case studies	
Assignments	

How do you rate the support from Campus Connect team for rolling out the program?	
Plan Review	
Course Material supply	
Developmental Assignments	
Certificate Issue	

What are the additional topics you would like to see in the deployment guide?

Other Comments/ Suggestions:

Appendix E

Sample Case Studies

This appendix contains samples of case studies and quiz questions. More material along these lines can be created by the faculty during the program rollout.

Sample Case Study for BCS

Body language – Case Study: Interpret each of the following non-verbal behavior interpretation. Make a note about what you think it means and how you should respond.

Behaviours	Possible Meaning	Your Response
1. Someone who avoids eye contact and moves slightly away from you.		
2. The other person clears his/her throat repeatedly and fiddles with papers.		

3. Seated on the edge of a chair, leaning forward and looking intent.		
4. The other person who is seated leans back, casually put hands behind head and stretches.		
5. The other person chooses the higher of two chairs and leans away from you.		
6. The other person nods slightly and moves a bit closer to you.		
7. The others person frowns and stares with lips pressed tightly together.		
8. The others person folds his arms across his chest and is quite.		

Written Communication – Case Analysis: Select any of the business cases provided below, and read through them carefully. Based on the information given in the case, write out your analysis of the situation, with a solution if required of the situation. At the end of each case, you have been asked to comment on or analyse precise aspects of the case. Please restrict your response to these aspects.

There is no right or wrong answer/ solution to these cases. Discuss them on the merit of the information given, and your own thoughts on what happened/ and can be the most appropriate solution.

You are project manager in-charge of a development project for a client in the Retail Industry. The client is into manufacturing consumer food products and had approached your company with multiple needs:

The client is looking at a system

a) which would help plan and schedule production

b) assist in raw material procurement decision making

c) assist in warehousing/stock holding decisions for both raw materials as well as finished products

d) assist in coordinating factory dispatches in congruence with regional sales forecasting

e) assist in sales forecasting

f) monitor redistribution stockists with respect to primary and secondary sales, credit position, off takes, pattern of purchases etc.

- Some pointers for areas which are amenable to cost reduction and your rationale for the same. If you are making any assumptions in suggesting areas for cost cutting, please articulate the same
- Some ideas on how the task force should be launched and led.

Caselet 2:

Factory Fruity is engaged in the production of jams, squashes and ketchup. It is the only manufacturing site for this product range as far as the company is concerned. Set up about 25 years back, this factory was purchased by the current Management as part of the management's strategy to diversify in to foods – then considered to be a sunrise industry.

The factory is managed by a team of 5 managers, 10 officers, 25 administrative/clerical staff and about 250 workmen who work in shifts. The manufacturing process followed is a batch processing, thus enabling the factory to remain closed on Sundays.

In addition to the permanent staffing indicated above, since the production of squash is a seasonal activity, the factory also has a heavy reliance on temporary workmen in the form of casual labourers. This happens during 5 of the 12 months in a year.

The factory is essentially responsible for production and dispatches. The production schedule for the factory comes from the central logistics department situated in the corporate office which does the planning for both sales and manufacturing.

The procurement of raw material like pulp, chemicals, preservatives, spices as well as packing material like cartons, labels, bottles etc are all handled by the Central purchase and Horticultural Department of the Company.

The dispatches of the finished products from the factory take place in truckloads which take the products to the Carrying and Forwarding Agents and from there the products are

distributed to the Redistribution Stockists. The purchase of finished products by the redistribution stockists represents a secondary sale for the Company. Subsequently, when the redistribution stockists sell these products to the retailers it constitutes primary sale for the Company.

The shelf life of the product is 12 months. The inventory stocking capacity of the factory is to the tune of 600 tons in total. Daily dispatches on an average are to the extent of 60 tons. During the summer months however, dispatches are higher at around 80 tons per day due to the heightened demand for squash.

At full utilization, the factory on an average can produce 45 tons per day – this figure however varies given the composition of the total output across jams, ketchups and squashes.

The factory as a measure of customer service efficiency collects data on a weekly basis from all the company redistribution stockists on the availability of SKUs –s stock keeping units – each pack, flavour and product combination is an SKU. For every available SKU the factory gets a score of 1, for every SKU unavailable at the moment of purchase, the factory gets 0. The scores across a week get totaled and represented as a percentage. This is the Stock Service Index.

Over the last 5 weeks in the months of May and June, the factory has noticed a sharp decline in the SSI from 85% to 70%.

Using a structured approach, identify possible problem areas and suggest solutions for those which seem the most important. Please state all assumptions upfront.

Sample Case Study for IRS

Assertiveness Skills – Role Plays: Each participant is assigned a role in a given situation that he/she has to enact.

1. On-site opportunity

There is an on-site opening in a project for a large insurance company in the US. The company is planning an upgrade from a previous ERP version, which incidentally was also done by your company. The requirement in US is for a technical consultant, who has worked for a minimum of 1-2 years in Infosys. The duration of the project is expected to be 3 months.

You are a group of 8 PLs who have nominated suitable candidates for the vacancy, from your respective teams. From this pool, each of you is completely convinced that your candidate is the most suitable for the requirement. All your candidates have 1.5 years of experience in your company and have offshore experience working for this maintenance project. Your task is to convince the other PLs that your candidate is the most suitable person to take up the on-site assignment.

Role and skills description of a Technical Consultant:

- He should communicate well and understand the requirements of the clients
- He should have a comprehensive, technical understanding of the ERP package
- He should collaborate effectively with the offshore team, about the technical requirements of the client.
- He should get along well with onsite counterparts and build an excellent team
- He should be able to do the integration testing
- He should possess good knowledge of the client's operating systems, database & hardware

Note: The nature of the work requires one to work under tremendous pressure and at odd hours.

Employee profile:

Participant # 1 – Your candidate, Aryan, is technically competent and has an excellent grasp on the package. He has the capability to manage most parts of the project single-handedly. On the other hand, he is overconfident and has a tendency to frequently interfere with his teammates' tasks much to their discontent.

Participant # 2 – You represent Ankit, who does not have an expertise in the current technology but has shown high learnability in the past. He is very popular with the entire team. He goes out of his way to help other team members even if it means compromising on his own work. He also has excellent communication skills.

Participant # 3 – You represent Gautam who possesses technical competence and is a reasonably good team player. He however, wants to do an MBA & is currently preparing for it. He has also shown keen interest in the opportunity and is confident of completing the assignment before he decides to quit for higher studies. He has an impressive record to back up his case.

Participant # 4 – You represent Maria who is very committed and has an excellent grasp over the technology. She is adept at planning and has never faltered on meeting deadlines. She works well in a team but is a little uncomfortable while meeting new people. She is engaged but is yet to finalize her marriage plans.

Participant # 5 – You represent Akshita, who possesses technical competence and is very committed to her work. She has reasonably good team and communication skills. She, however, does not take initiative or explore different possibilities. Infosys is her first job and she is very keen to work in this area.

Participant # 6 – You represent Anamika, a senior SE with more than 2 years of experience at Infosys. She has excellent social and customer interfacing skills, but tends to get a little high-handed with her team members, who resent it sometimes. You attribute this behaviour to her technical expertise and seniority in the team.

Participant # 7 – You represent Lalitha, who has been a reliable and technically competent member of your team. She has strongly felt and expressed the need to take on more responsibilities and you feel this is a good opportunity to retain and motivate her to stay back in your team for some more time.

Participant # 8 – You represent Abhishek, who is technically very sound and is often sought out by his team members for help with their work. Abhishek is a very good team player. But in formal and social contexts, he is usually reserved and prefers to involve himself in only technical discussions.

2. Working in night shift

You are a team of 6 persons working on a 24*7-maintenance project. One week from now 3 of you would be required to work in the night shift. The PL has asked you to discuss amongst yourselves and decide who among you will do this. Each of you would be given your role description. You will meet with your entire team for a 30 min meeting at the end of which the team collectively needs to decide which 3 would work in the night shift.

Role Descriptions:

Anu- You are 3 months old in the organization. This is the first time you have come to Bangalore. You do not have any relatives or friends in the city. In these 3 months owing to the work pressure, you have not had too many opportunities to get to know the city and its people much. Your residence is 30 km from the office and there are no early morning buses plying on that route. Also, you are currently staying in a ladies' hostel where you have signed an agreement to strictly adhere to the hostel rules and regulation (one of them being to be back in the hostel by 11 pm) failing which you could be asked to vacate the hostel within a week.

Girish- You live in a nuclear family with your wife and an 8 yr old daughter. Of late, your wife has not been keeping well and has been advised to take complete bed rest. This has led to a lot of additional responsibility for you. While a nurse is there from 10 a.m. to 6 p.m. you are the only person to take care of any emergency for the rest of the time. You have already taken 2 weeks off when your wife was in the hospital and hence are unable to avail of any more leave. Both you and your wives parents stay abroad and have recently returned after a long trip to India.

Rohit- You stay with your grandfather who is very old and needs to be taken proper care of. You are the only person to look after him. While during daytime, you can rely on some of your neighbours to take care of any emergency; there is actually no one during the night. Your grandfather has become very irritable because of which none of the caretakers tend to stay for more than a week. The increasing work pressure is making it difficult for you to change caretakers so frequently.

Saurav- You are the most recent member in this team. The reason you asked to be moved out of your earlier project was too many late nights, which you believe affected your health. You, therefore, accepted this project even though it meant compromising on the technology you would get to work on. Your health has started showing improvement and you believe that by regulating your work schedule it will get even better.

Vinita- You have got married just 6 months back and are currently living in a joint family. Your husband's family is very rich and your in-laws are not particularly keen that you continue working. However, you have continued to work thanks to your husband's support. You are not quite sure how open your husband would be to your working in night shift.

Radhika- Both you and your husband work for IT companies in Bangalore. You have two children aged 8 yrs & 5 yrs respectively. A regular pattern for your husband is to come home everyday by 9 p.m. and be on telecons with his on-site team from 10 to 12 in the night. His team is currently working on a very critical project. Since most of the onsite members are not very experienced his daily interaction with them has become even more crucial for the success of the project. You have no other support to take care of your family.

3. **Release for a new project**

You are a part of an 8-member team working on a key maintenance project on Java for the last 1 year. A new software development project is in the pipeline in your IBU. The project is based on Oracle and promises to be a very challenging and interesting one. All the team members are very keen on working on the project. However, only 2 of you would be released. The others will have to continue working on the old project at least for another year. The PM has asked the team members to decide amongst themselves the 2 people who should be released. Assume any one role based the profile given below and discuss with your group why you think you should be released for the project.

Rohan – You are a developer and have 4 yrs of work experience in Infosys. During this tenure you have worked on different technologies predominantly in development projects. Your work has always been appreciated. You, therefore, are confident that your experience and ability to learn new technologies are strong enough reasons for you to be moved to the project.

Renuka – You are also a developer who has been in Infosys for the past 2 yrs. You have good knowledge of Oracle but have not worked on it before. You possess very good decision-making and crisis handling abilities. There have been quite a few occasions when your inputs have really been of great help to your PM.

Nikhil –You are an SE, 1 ½ yrs old in the organization and during these years have gained expertise both in Java and Oracle. You, therefore, feel that compared to your other team members you stand the greatest chance of release. However, you are a critical resource for the current project by virtue of your expertise in Java.

Nishant – You are a PA have 4 yrs of work experience of which 1 yr has been in Infosys. You have led quite a few projects including one based on Oracle.

Abhishek – You are a developer and have 2 ½ yrs of work experience at Infosys. You have been a star performer and have shown tremendous potential for growth. You have been very versatile in assuming different roles. You are resilient and have performed against all odds. You possess very good team skills.

Rohini – You are an SE and have 3 yrs of work experience at Infosys. All along you have only been working on maintenance projects. You have often expressed your desire to work on a development project to your PM.

Sunitha – You are an SE with 3 years of work experience and have joined this team after having worked in multiple projects. The last one has been a project, which used a database similar to Oracle. You understand the technology very well and personally think it is the domain that you would want to build expertise in.

Rishi – You are an SE with close to 1-year experience at Infosys during which you have been shuffled between projects rather frequently. You now seek some stability and

means to prove your capability. In your current project, you have often felt that the senior members have dominated the scene, and lack team spirit and the openness to new ideas.

Dealing with feelings – Case Study:

1. Silver Mine (Adapted from S Lee Owens & Allan Reddy of Tennessee Tech University)

The New Way Printing Company was organized by Barto Bean in Chicago in 1950. In addition to Mr Bean, the owner, the company had 2 other employees. The New Way Printing Company was a commercial printing company which catered to small business firms in the city.

Over the years the company prospered. In the early 1960s, the company was changed from the New Way Printing Company to the Key Printing Company. In 1972, Mr Bean sold the Key Printing Company to Imprint, Inc., of Rockford, Illinois.

Several years later, at the writing of this case, the Key Printing Company employed a total of 46 officers and employees. Of these 11 worked in the office and 35 worked in the plant.

Tom & Doris

Tom Watson was 25 years old and had been an employee of the company for four years. He worked in the plate room of the camera department. Out of the corner of his eye he saw Doris Templeton (supervisor of the camera department & nine years with the company) coming towards him. Tom thought to himself, "Now what is wrong?" When Doris spoke, though she tried to control her voice, Tom could make out that she was angry.

Doris kept a make-up plate on the desk and proceeded to point out three errors in the plate. Then she said, "I am getting awfully tired of having to bring back work to you. It seems to me you could get things right the first time.:

Tom said, "Most of the time I do get them right the first time. Besides one of these errors is not mine and I could explain the other two." After a few more exchange of words, Doris returned to her office.

Tom turned to Bill Scott, another employee, and poured his heart out. He felt that Doris always tried to find fault with him, looking for an opportunity to chew him up. In fact, she was doing it the second time this week.

Silver Recovery

One Saturday night at about 9:00 pm, some two months after this incident, Mary Bella, Executive Secretary and member of the Board of Directors, received a call. Mary had been with the company for 20 years. Tom Watson was on the line. He said, "Mrs. Bella I have quit my job." Mary, surprised, asked, "Why? What happened?"

"I got fed up. I just couldn't take Doris any longer." was Tom's response. He went on to say, "Mrs. Bella, there is something going on in the camera department that you should know about. But first you must promise not to tell who told you." Mary promised not to tell.

Tom went on to say. "It's not as if I want to get even with the Camera Department. Several months ago, in February I think, the employees in the camera department went in together and purchased a silver reclaiming unit.." Tom went on to explain that the employees were selling the silver flakes to a silver refining company and were splitting the money from the sale among themselves. Tom said, "The reason I am telling you this, even though I received my share, is that I do not think this is right. I think that money belongs to the Company, not to the employees." (when film and plates are processed, the

silver on the film and plates normally go down the sink drain). Mary probed Tom further and hung up after assuring him that the matter would be looked into.

The Investigation

Mary's investigation revealed that Tom's story was true. She obtained a copy of a one-year contract signed by Doris, with the Silver Bell refining company of Chicago. In this contract, Silver Bell had agreed to install without charge, on a loan basis, a silver reclaiming machine, and Doris agreed to sell to Silver Bell the reclaimed silver flakes at the designated market price.

Mary also found that the sale of accumulated flakes happened two to four times a year. She found evidence of sales amounting to $287 and no evidence of any proceeds being turned over to the company.

Things became complicated when Mary found that the East Plant Manager, Harry Hall, who had been with the company for 16 years, knew about this for some time and was even willing to assume responsibility for the whole affair.

One evening Mary decided to discuss the problem with her husband. "I have not yet reported my findings to the President," she said. " I feel strongly that it is my duty to do so; but it may result in Doris and Hall losing their jobs," Mary said. Mary's husband pointed out that on the other hand if she reported it and they were not fired, they would be extremely upset with her and may even seek revenge. .....

What do you think is the issue in this case?

What was the motivation for Tom Watson's action? Please state your reasons

What is Mary's dilemma?

What should Mary do, when and why?

1. Experience of Poor Customer Service

Think of an incident when you received really poor services. Recall what happened, why were you so dissatisfied, the negative actions that were carried out by the people linked to the experience. Answer following questions.

a) **Why was the experience so bad?**

b) **List down the negative points that you link with that experience?**

c) **Has the experience affected your subsequent dealings with that person / organization?**

d) **List down how could have the service been improved?**

Exercise 1: Trust---ask group to hold onto rope tightly and make a circle (they will do it very easily). Then ask them to close their eyes and make a square. They will struggle—not many will speak up---one or two take the lead. Finally, it will look like a circle!! In a team, there has to be a leader and some followers.

Exercise 2: Divide group into two teams. Put blocks of wood /or sugar cubes on table. Ask team to choose one person who can build the blocks. Ask that person how many blocks he can build into a tower without even one block falling off and using only one hand. Once he/she gives a target quantity---blindfold him/her and request other team members to guide for block building without touching the blocks. This exercise shows that there needs to be clarity in teams.

Stages of Team formation - Case Study:

New Horizons Pvt. Ltd an organization which commenced operations in 1998, managed to open 25 new offices at different locations in the country within a short span of 3 years.

Upon being asked about how things were when the company just started, Vikas Tewari, who joined New Horizons as a management trainee in late 1998 and was now heading the Mumbai branch said, "In order to do I would like to go back to the inception".

Initially when he joined there were 6 other management trainees who had also joined at more or less the same time. There was very little interaction amongst this small group and people were doing a lot of reading to learn the ropes. "Everyone was more or less a loner and any attempt to get into a conversation was marked by a forced smile and sharing of superficial information pertaining to qualification and previous experience", said Vikas. "Coming to work was a drag and all I used to do was wait for the day to be over".

"Over a period of time this initial attitude of holding back started dissolving and people got more vocal. Ashwin who was one of the trainees who was the most experienced amongst us did his best to get noticed by the Directors by always being there to take the credit and suggest changes in the current style of operation. Initially there was lot of hostility with regards to Ashwin's attitude which gradually changed as we began to see sense in his suggestions. Soon he became a sort of consultant to all of us. I assumed the role of presenter where I was asked to make all important presentations to clients".

"After a while the strength of each person within the group became apparent and all the members started depending more and more on each other. The focus changed from doing one's own job to looking at the group goals. In case any members of the group fell ill, his responsibility was willingly handled by someone else. The atmosphere became extremely relaxed and we learnt to depend upon each other. No problem was impossible to tackle and all problems from yours and mine became ours. I am certain it was at this stage the organization started to witness phenomenal growth because it was then that we became a complete team.

List down the various phases that are mentioned in the case study?

What was the situation at the inception of the company?

How did people behave with each other?

After some time what were the changes that happened with respect to Ashwin?

Gradually, how did the team reach a stage of being bound by a common commitment?

Sample Case Study & Exercises for C2C

Ethics Policy and Principals - Case Study:

a) Name 2 person in your life whom you admire most?

b) What is your relationship with them?

c) Write down against each name the character traits that you admire in the person?

d) Write down against each name the principles that you think the person lives by?

e) Write down against each name the values you think the person practices?

Case 2: On a scale of 1 to 10 rate the ethical value that are important to you and also state the reason. Rating 1 would be given to the ethical value that is most important to you and 10 to the least. Leave out those values which are not important to you as of now.

a) Success : _____

b) Wisdom : _____

c) Wealth : _____

d) Love : _____

e) Adventure : _____

f) Honesty : _____

g) Freedom : _____

Health : _____

h) Sense of Achievement : _____

i) Power : _____

j) Contributions to others : _____

k) Happiness : _____

l) Compassion : _____

- Technical knowledge
- Process orientation & domain knowledge
- Communication skills
- Confidence
- Body language
- Dressing sense.

Sample Case Study for GIP

Group Decisions – Case Studies:

1. Your Project Lead has convened a meeting for group review of Impact analysis done for a particular change request. He begins the meeting by an overview of the change request. During this process, other team members also join in and a discussion on the same ensues. At the end of the stipulated 45 min for the meeting, one of the participants decides to take leave, as he has to go for another meeting. At this, the Project Lead adjourns the meeting and postpones the group review for a later meeting.

What do you think went wrong here?	How can it be avoided/ improved?

You receive a meeting requester for a meeting to discuss _____. Since you have been involved with _____, which was very remotely connected to the concerned issue you were not sure if your presence was required in the meeting. Since you are fairly new to the team, you completely relied on the judgement of your ML/PL regarding your presence for the meeting and decided to go. Once the meeting began, you realized that the issue under discussion was completely unrelated to your work. You did not have enough knowledge or understanding on the same to be able to follow the discussion. You sit through the meeting.

What do you think went wrong here?	How can it be avoided/ improved?

You receive the final agenda for a review meeting 3 hrs before the scheduled time. Since you were tied up in meeting a service request, you did not go through it immediately. Later it slipped out of your mind and you went for the meeting. There to your surprise you discovered that some of the agenda items had been changed, one pertaining to your work. You needed data and figures to discuss/share the information with the rest of the team. Since you were unaware of this inclusion, you had not come prepared with the required data. As a consequence, the item had to be dropped and you were left sitting in the meeting, embarrassed.

What do you think went wrong here?	How can it be avoided/ improved?

Group Decisions: Divide the student in a group of 8-10 students. Identify a work/organization related topic, which is of relevance to student and organize a 30 min. group discussion on it. Some of the topics could be

- Career paths
- Impact of the outsourcing backlash in US on Indian business.
- Microsoft products vs. Open Source software products
- On Track – Was the discussion on track?
- Participation –Was the participation healthy? Did everyone get a chance to participate?
- Listening – Did everybody in the group feel that their ideas or points of view have been heard?
- Shared Leadership – Was there a clear sharing of leadership in roles within the group or were only a select few carried out the responsibility?
- Results – Did the group achieve the desired goals?
- Overall Satisfaction - Overall, how satisfied is everybody with the meeting?

Presentations: Assign any technical topics (or any non-technical topic also) to student based on his area of interest. Ask student to make PPT presentation for 10 min. durations including query-handling session. On a Scale of 1 to 5 student can be evaluated on various parameters like:

1) Objective of Presentation Stated
2) Creativity in designing PPT
3) Informative
4) Relevance
5) Flow of content
6) Clarity of thought
7) Knowledge on topic
8) Timeline
9) Conclusion
10) Language Fluency
11) Voice Modulation
12) Eye contact and Body Language
13) Query Handling skills
14) Connect with the audience
15) Confidence

Sample Case Study for ESD

Write about a goal you had set for yourself earlier and succeeded in:

- State why it was successful?
- How did that make you feel?
- What did you learn from that experience?

Sample Quiz Questions

This appendix contains samples of quiz questions that can be used pre and post classroom lectures to gauge the understanding of the concepts involved.

PRE AND POST TEST QUIZ

NAME: COLLEGE:

1. The most important features of communication are a) clear enunciation and expression. b) good knowledge of the language. c) sharing and common understanding. d) presentation of information.		C
2. One-way communication is not meaningful because a) the sender dominates the communication. b) the receiver does not understand the sender. c) the receiver cannot give a response. d) both sender and receiver are confused.		C
3. Good communication occurs when a) the sender is loud. b) the sender is clear. c) the receiver is clear. d) the receiver understands the sender.		D
4. Effective communication occurs due to a) clarity. b) brevity. c) mental alertness. d) good understanding.		A
5. In normal speech, the term 'word lag' refers to a) difficulty in pronouncing technical words. b) difference between the speeds of speech and a) understanding. b) non-connection of thoughts and speech. c) stammering or stuttering.		B
6. Congruency of communication refers to a) oneness of words, tone, and body language.		

b) proper reference to the subject under consideration. c) political impact of the communication. d) homogeneity of the entire message.		A
7. The contribution of body language to any conversation is a) negligible. b) appreciable. c) significant. d) very important.		D
8. While actively listening to a person you a) try to understand what he is saying. b) offer him advice on all the doubts he has. c) solve any problems that he may raise. d) console and advice him on his failures.		A
9. Feedback given to a person consists of a) giving a response to his action or behaviour. b) telling him the effects of his action or behaviour. c) correcting his action or behaviour. d) advising him how to behave in future.		B
10. When receiving negative feedback in corporate life from another person who you do not like a) be aggressive so that he doesn't take you for a ride. b) question his motives for giving the feedback. c) accept the feedback gracefully. d) ignore the feedback since you have done the correct e) thing.		C
11. A large part of data hidden in communication consists of a) ideas. b) assumptions. c) feelings. d) sensations.		C
12. When doing a perception check, you are checking out a) intentions.		

b) motives. c) reactions. d) all the above.		D
13. When you are assertive, you are actually a) being aggressive. b) being pushy. c) aiming for a win-win situation. d) telling the other person where he gets off.		C
14. One of the techniques of assertiveness is a) changing the subject. b) defusing the situation. c) responding with emotion. d) criticizing or questioning.		B
15. The labeling process in the area of self-confidence conveys a) a sense of pride regarding my work. b) a sense of happiness regarding the quality of my c) decisions. d) a sense of blame that I am always a loser. e) a sense of anger that the other person is out to get me.		C
16. A team works very well when a) all the members are similar in skills, experience, behaviour. b) all the members have the same specialization. c) all the members are different from one another. d) all the members question one another on every aspect.		C
17. One of the characteristics of an effective team is a) common goals and objectives. b) strong authoritarian leader.		A

c) common specialization of the members. d) risk-taking ability of the members.		
18. Which one of these is not an objective of group discussion a) idea generation. b) idea sharing. c) having fun. d) criticizing ideas.		D
19. One of these is not a personality trait assessed by a GD a) Reasoning ability. b) Flexibility. c) Listening ability. d) Feedback ability.		D
20. One of the strategies for improving group decisions is a) by questionnaires. b) by seminars. c) by brainstorming. d) by inviting perspectives.		C
21. The best way to take a group decision is a) by majority rule. b) by consensus. c) by authority rule. d) by minority rule.		B
22. The single most important factor for a good presentation is a) initial planning. b) preparation. c) practice. d) outlining.		C
23. When handling questions during a presentation, to save time a) always answer questions without repeating them. b) answer all questions only after the presentation is over.		C

c) tactfully interrupt vague, rambling questions to clarify things. d) answer the question as soon as it is asked.		
24. When addressing an audience in a formal suit with a 3-button coat a) all three buttons of the coat should be buttoned. b) only the top two buttons should be buttoned. c) the second and third button should be buttoned. d) all the buttons should be unbuttoned.		B
25. The handbag carried by the career woman should match a) her jacket. b) her trousers. c) her blouse. d) her shoes.		D
26. When wearing western formals, it is safest to wear a) strapped sandals. b) laced closed shoes. c) costly sports shoes. d) slip-ons with socks.		B
27. If it is very hot in a club you have been invited to, and you want to remove your jacket before sitting for the meal, you a) ask the headwaiter for permission. b) ask the Secretary of the club for permission. c) follow the lead of the host/hostess. d) remove your jacket without asking anyone.		C
28. One of these is not a principle while developing your ethics policy a) Purpose. b) Perspective. c) Pride. d) Patience. e) Profit.		E

29. An ethical dilemma is characterized by a) a sharp division between right and wrong. b) a blurred division between right and wrong. c) real alternatives that are equally justifiable. d) resolving conflicts where one option is a clear choice.		C
30. Which of the R's below does not point you in the ethical direction a) RESPECT. b) RECONSIDERATION. c) RESPONSIBILITY. d) RESULTS.		B

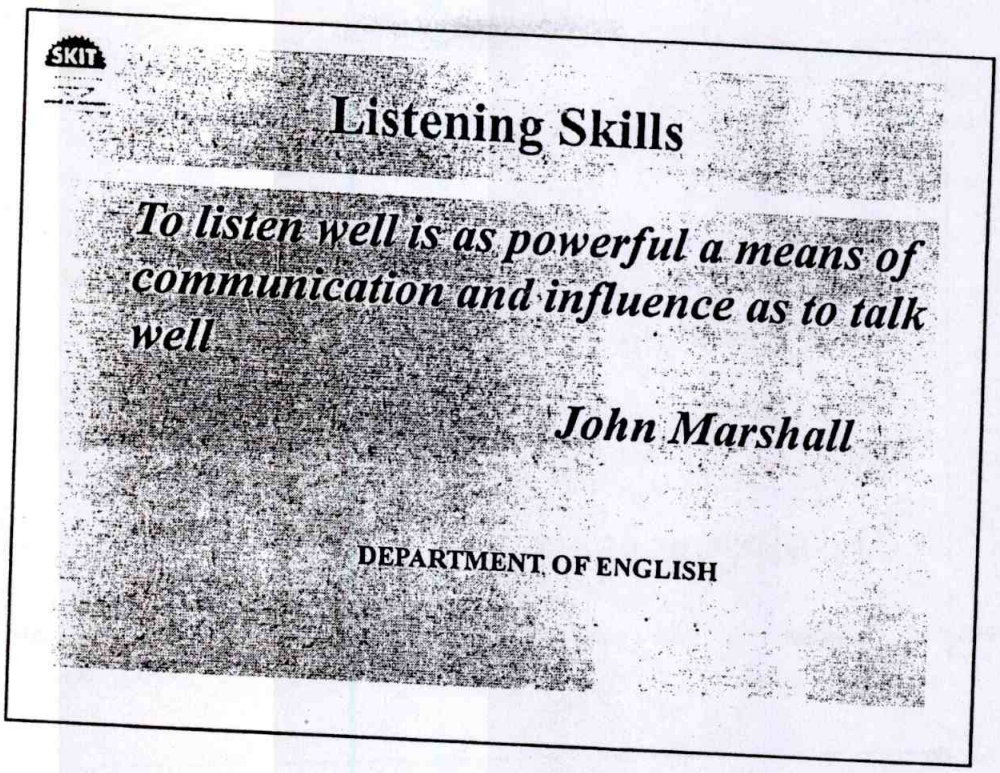
Contents

SOFT SKILLS EVENT CALENDAR -2015

Date	Event (Inter-branch Competitions)
July 29	Burnishing Brains: Debate
Aug. 5	Mighty Pens: Movie –Review
Aug. 12	Theatre: Skit on Assertiveness & Attitude
Aug. 19	Talent Hunt
Sept.2	Who am I? (Speeches)
Sept. 9	Brain Games
Sept. 16	Round Table Talks
Sept. 23	Speaking sans Speaking
Sept. 30	Documentary on Myths
Oct. 7	Ad-lib (Extempore)
Oct.14	Melting Pot (Poetry)
Oct.21	Spell Bee & Vocab Meter
Oct.28	Felicitation Ceremony

Session- 1

- Listeni ng Skills
- Speaking Skills
- Worksheets
- Audio / Video



Objective

- To empower listening skills
- Hearing vs Listening

Points to Discuss

Listening is a conscious activity based on three basic skills:

1) **Attitude**
2) **Attention**
3) **Adjustment**

Types of Listening

- **1. Passive listening.**
- **2. Selective listening.**
- **3. Evaluative listening**
- **4. Empathetic listening**

Are You a Good Listener or do you just hear ?

1. . Do you frequently think of other things when others are talking to you?
2. . Do you doodle, shuffle papers, look at the clock or out the window, read the newspaper,or watch TV?
3. . Do you only selectively hear ideas that fit your beliefs?
4. Do you feel most people have little to talk about that is interesting or important?
5. . Do you listen passively without any facial expressions?
6. . Do you frequently interrupt others as they are speaking?
7. . Do you complete sentences or ideas for people when they pause to think?
8. Do you silently criticize characteristics of the speaker: voice, looks, manner of speaking?
9. . Do you have to ask people to repeat what they said because you have forgotten?

Feedback

- **Was the content satisfying?**
- **Did the exercise help you in active listening?**
- **Further suggestions for improvement**

Can you tell if someone is excited to do something or is not looking forward to something? While listening, try to determine a speaker's emotion. How is that emotion expressed?

CD 1 TRACK 16

EXAMPLE

You will see: *Choose the correct letter, **A**, **B**, or **C**.*

What is Mark's attitude toward the debate?

A He's nervous.
B He's looking forward to it.
C He's more excited than Jane.

You will hear: Jane: I can't wait to debate the team from Oxford.
Mark: I'm more apprehensive than excited. In fact, I'm not looking forward to it at all.

Common Words That Express Emotion

afraid	ecstatic	nervous
angry	embarrassed	pleased
annoyed	exhausted	proud
ashamed	frustrated	sad
bored	happy	shocked
confused	jealous	surprised
disappointed	mad	unhappy
disgusted	miserable	upset
		worried

Questions 1–6

Listen to the conversations and answer the questions about emotions.

1 How did local residents feel about the millionaire's donation?
A angry
B surprised
C excited

2 How does the man feel about his science experiment?
A frustrated
B glad
C eager

3 What confuses students?
A foreign languages
B language lab equipment
C class assignments and tests

4 What is the man's attitude toward the contest?

A He's upset.
B He's disappointed.
C He's indifferent.

5 How did people at the school feel about the mayor's visit?

A They were surprised.
B They were bored.
C They were annoyed.

6 How does the woman feel about her research project?

A nervous
B bad
C happy

Speakers often compare or contrast objects or ideas to help describe something. In this section, you will have to determine what is being compared and what is being contrasted.

EXAMPLE

You will see: Put a check (✓) to show if these items are alike or different.

		Same	Different
A	Nationality		
B	Sex		
C	Age		
D	Given name		
E	Present occupation		
F	Future occupation		
G	Sports		
H	Love of dancing		

You will hear:

Speaker 1: I've been corresponding by letter with a French student.

Speaker 2: In English? You don't speak French, do you?

Speaker 1: No, unfortunately, but she writes English well. We have a lot in common.

Speaker 2: Like what, your age?

Speaker 1: Well, I'm actually about two years older than she is. But we do have the same first name.

Speaker 2: And you're both students.

Speaker 1: Yes, and we both are studying to be doctors, although she wants to be a pediatrician[1], and I want to be a neurosurgeon.

Speaker 2: It seems the only similarities are your sex and your given name.

Speaker 1: Well, we both like to swim. She likes to dance, too, but you know how little I like dancing.

These words and phrases are often used with comparison and contrast.

Comparison		Contrast	
almost the same as	in common	although	more than
also	just as	but	nevertheless
as	like, alike	differ from	on the other hand
at the same time as	neither/nor	different from	otherwise
correspondingly	resemble	even though	still
either/or	similar to	however	unlike
in a like manner	similarly	in contrast to	while
in the same way	than	instead	yet
		less than	

Questions 1–4

Complete the chart below based on what you hear.
Put a check (✓) to show if these items are alike or different.

1 Jobs

	Alike	Different
A Salary		
B Schedule		
C Responsibilities		
D Location		
E Transportation		

2 Libraries

	Alike	Different
A Location		
B Size		
C Parking facilities		
D Number of books		
E Services		

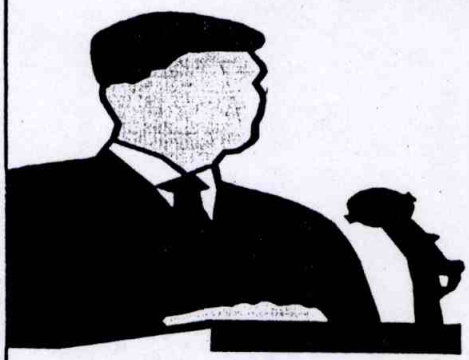
3 Club Memberships

	Alike	Different
A Cost		
B Use of club facilities		
C Access to fitness classes		
D Locker room privileges		
E Individual fitness plan		

4 Frogs and Toads

	Alike	Different
A Place for babies to live		
B Place for adults to live		
C Type of skin		
D Shape		
E Way to make sounds		

Speaking Skills



"You can speak well if your tongue can deliver the message of your heart."

John Ford

DEPARTMENT OF ENGLISH

Objective

- To enhance speaking skills
- To eliminate stage fright
- To enable the students to present podium talk

Points to discuss

3 Ps of Effective Speaking

- Preparation
- Practice
- Present

Sample speech outline

- Introduction
- Body
- Conclusion

Feedback

- Were you able to share your thoughts?
- How did preparation and practice help you?
- Further suggestions for improvement

Worksheet

Speaking Skills

Topics for Podium Talk

Tell about a time when you lost something.

Tell about one of your fondest childhood memories.

Tell about a time when you lied to your parents, boss, or teacher.

Tell about a time when you were treated unfairly.

Briefly tell about a movie you saw recently.

Tell about something you made "from scratch."

Tell about a "close call" you had recently.

Tell about something you wish had never happened.

What would you do if someone accused you of a crime you didn't commit?

What would you do if you got lost in an unfamiliar city?

What would you do if you left something in a locked building?

What would you do if your best friend stole something from you?

What would you do if you didn't have enough money to pay your bills?

What would you do if your children were caught shoplifting?

What would you do if your car got a flat tire on the freeway?

If you could change one thing about your past, what would it be?

If you could change one major historical event, what would it be?

What is your opinion about cellular phones?

What is your opinion about women in the military?

What is your opinion about a current politician?

What is your opinion about violence on television?

What is your opinion about fortune telling?

What is your opinion about the tabloids?

What is your opinion about legalizing marijuana?

What is your opinion about the welfare system?

What is your opinion about cloning?

What is your opinion about recycling?

Session- 2

- Reading Skills
- Writing Skills
- Worksheets

Reading Skills

Some books are to be tasted, others to be swallowed, and some few to be chewed and digested

Francis Bacon

DEPARTMENT OF ENGLISH

Objectives

- To discuss the standard techniques used for developing reading skills
- To enhance the skill of speed reading

Reading Skill Matters…

- It enables us to read in a more focused and selective manner
- It reduces unnecessary reading time.

Ways to improve reading skills

Scanning(reading a text quickly in order to find specific information)

- Introduction or preface of a text
- First or last paragraphs of chapters
- Concluding chapter of a text
- Book index
- Telephone directory

Contd...

- **Skimming**(the process of speedy reading for general meaning)
- pre-view a selection of text prior to detailed reading
- refresh your understanding of a selection of text following detailed reading.

Detailed Reading

- Underline/ highlight keywords/ sentences
- Ask questions
- Summarize in mind .

Developing your reading speed

- Set your reading goals.
- Survey the text before you spend the time and effort involved in detailed reading.
- Scan and skim to select the text for detailed reading.
- Scan and skim after detailed reading to reinforce your understanding.
- Use a form of note taking to provide you with a record of your reading.
- Increase the number of words the eye recognizes in a single fixation.

Feedback

- Has the presentation made a clear difference between skimming and scanning?
- How far do you think is the concept of detailed reading useful?
- What more can be done to acquire reading speed?

Writing Skills

For a born writer, nothing is so healing as the realization that he has come upon the right word.

—Catherine Drinker Bowen

DEPARTMENT OF ENGLISH

Objectives

- To understand the select approaches to writing.
- To revise the various stages of writing a draft.
- To acquire a clear perception about mind-mapping.

Points to discuss

- **Composition and Style**
- **Structure**
- **Grammatical Errors**
- **Editing**
- **Proofing**

You may follow

- ***A Product Approach***
  A traditional approach, in which students are encouraged to mimic a model text, which is usually presented and analyzed at an early stage.
- ***A Process Approach***
  Writing tend to focus more on the varied classroom activities which promote the development of language use: brainstorming, group discussion, re-writing and so on.

Pre-writing stages

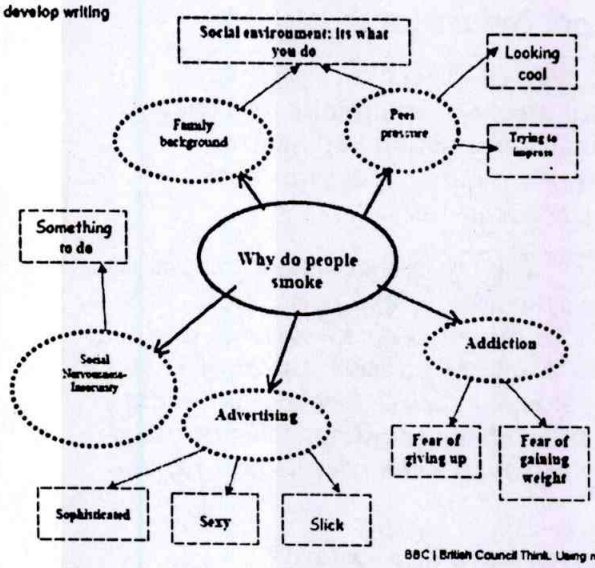
- –Generating ideas
- –Focusing ideas
- –Focus on a model text
- –Organizing ideas
- –Writing
- –Peer evaluation
- –Reviewing

Try Mind Mapping

A mind map, or spider gram is a strategy for making notes on a topic, prior to writing. Such as brainstorming.

Using mind maps – Think © BBC | British Council 2005

Using mind maps to develop writing



BBC | British Council Think. Using mind maps – Page 1

Feedback

- Which approach do you think suits your writing style?
- Do you follow the various stages when you think you are done with your draft?
- How useful do you think is the mind-mapping technique for developing writing skills?
- What additional thing would you like to add to hone your skills in writing?

Exam question

Your English class have been discussing the topic of young people using the internet. Your teacher has asked you to write an essay answering the following question:

Is the internet bad for young people?

Is the internet bad for young people?

It is now easier than ever to access the internet, whether you are using a computer, phone or tablet. There is no doubt that many young people are spending more and more time online, with both positive and negative consequences.

One advantage of the internet is that young people can do research for their schoolwork and homework. This often helps teenagers to widen their knowledge and improve their grades. Another positive aspect of the internet is that people can practise foreign languages by chatting to friends in other countries. This is also a good way of keeping in touch with friends and family around the world.

On the other hand, there are also negative consequences. Some young people become addicted to online gaming and this can mean that they waste too much time playing these games. This can have a negative effect on their schoolwork, the amount of exercise they get and their social lives. In addition, excessive internet use can mean that some young people hardly talk to their families because they are always on the computer.

[redacted] spending time on the internet can have a negative impact on young people, but it also has many advantages. Personally, I think the internet is an incredible tool and the benefits of internet access outweigh the dangers. However, we should be careful not to use the internet excessively.

Top Tips for writing

1. Start by saying what the current situation is or introducing the debate.
2. In the second paragraph talk about the advantages or reasons in favour. Use expressions like *One advantage of X is ...* and *Another advantage of X is ...*
3. In the third paragraph give the disadvantages or reasons against. You can start this contrasting paragraph with *On the other hand, ...*.
4. [redacted]

1. Check your writing: grouping – ideas

Here are some ideas for a new essay entitled 'Is it acceptable to keep animals in zoos?' Circle whether each point answers *Yes* or *No* to the question.

1.	Zoos educate the public and give children the chance to see animals they could never normally see.	*Yes*	*No*
2.	Animals in zoos often suffer from stress and boredom.	*Yes*	*No*
3.	Sometimes animals escape from their enclosures, which is dangerous for humans.	*Yes*	*No*
4.	Zoos protect animals by bringing them into a safe environment.	*Yes*	*No*
5.	Bigger zoos have lots of space and make sure the animals have everything they need to be healthy and happy.	*Yes*	*No*
6.	It is not right to imprison an animal, just for the entertainment of humans.	*Yes*	*No*
7.	Unwanted animals from zoos are sometimes sold to circuses, hunting parks and even for meat.	*Yes*	*No*
8.	Many zoos help endangered species to find a mate and breed. They would not have this help in the wild.	*Yes*	*No*

2. Check your writing: gap fill – useful phrases

Fill the gaps in the essay with the correct word or phrase from the box.

Another drawback is	One advantage of	Personally,	In addition,
On the other hand,	There is no doubt that	Another positive aspect of	To conclude,

[1] _____ the subject of keeping animals in zoos creates a lot of debate. Some people say zoos are traditional family entertainment and good for animals. Others say keeping animals in zoos is cruel and inhumane.

[2] _____ zoos is that they give people the chance to see and learn about animals. This makes people more likely to want to look after animals and protect their natural habitats. [3] _____ zoos is that they help to protect endangered species by offering them a safe place to live. [4] _____ zoos help to find mates for endangered species. For example, many pandas would not find a mate to breed with if they were on their own in the wild.

[5] _____ there are many arguments against keeping animals in zoos. Firstly, zoo animals often suffer from stress and boredom when they are not in their natural habitat. Secondly, unwanted animals are sometimes sold to circuses, hunting parks or for meat. [6] _____ that animals sometimes escape from their enclosures, which is dangerous for humans.

[7] _____ there are strong arguments for and against keeping animals in zoos. [8] _____ I think it is acceptable to keep animals in zoos, as long as they have enough space and are properly looked after.

Discussion

What's your opinion? Do you think the internet is bad for young people?

Do you think it is acceptable to keep animals in zoos?

what's on?

A

Inline skating marathon

30 km on wheels

@ Bradgate Park, Sun 29 July

Starts 10 a.m.

Register at

www.inlineskatemarathonjuly.com

B

sci-fi festival

Sat 28 July

12 p.m. - 12 a.m. at the Phoenix Arts Centre

Admission

£15 children & seniors

£20 adults

C

Oliver!

The musical

At *The Curve Theatre*, Rutland Street

Tues 31 July – Sun 12 Aug

Tickets available at *The Curve Theatre* ticket office.

D

RUGBY

Leicester Tigers

v

Nottingham Giants

Pre-league friendly match

Sat 25 August

Kick-off at 3:00 p.m.

City Stadium

E

NEW multi-screen cinema

Opens Sat 28 July

12 screens with digital sound and 3D projection systems

Cine Paradise, Victory Square, Nottingham, NT1 3BR

www.cineparadise-notts.co.uk

F

Medieval market

Shepton town square

Thurs – Sun

10 a.m. – 11 p.m.

Traditional crafts, food, sports and games

1. Check your understanding: questions

Read the questions and write the correct advert (A–F).

1.	In which advert can you see actors and actresses performing on stage?	In advert .....
2.	In which advert must you register online first?	In advert .....
3.	In which advert does the event finish at midnight?	In advert .....
4.	In which advert can you see two professional sports teams?	In advert .....
5.	In which advert can you see the latest Hollywood movie?	In advert .....
6.	In which advert can you learn about the culture and customs of people many years ago?	In advert .....
7.	In which advert do you need a special kind of shoes?	In advert .....
8.	In which advert do people over the age of 65 pay less to enter?	In advert .....

2. Check your understanding: true or false

Circle *True* or *False* for these sentences.

1.	The musical performance of *Oliver!* starts in August.	*True*	*False*
2.	The medieval market in Shepton town square is closed on Sunday.	*True*	*False*
3.	The rugby match starts at 3:00 p.m.	*True*	*False*
4.	You have to register for the inline skating marathon online.	*True*	*False*
5.	The sci-fi festival runs for one day.	*True*	*False*
6.	You can eat traditional food at the medieval market.	*True*	*False*
7.	Tickets for the musical performance of *Oliver!* can be booked by phone.	*True*	*False*
8.	The sci-fi festival is on the same day as the new cinema opening.	*True*	*False*

Discussion
What do you like to do when you go out?

Session- 3

- Assertiveness
- Attitude
- Worksheets
- Video

Attitude

If you can't change your fate, change your attitude

Anonymous

DEPARTMENT OF ENGLISH

Objectives

- Change focus, look for the positive and avoid negative thought process
- Develop an attitude of gratitude
- Encourage the students to maintain a Gratitude Journal

Points to discuss

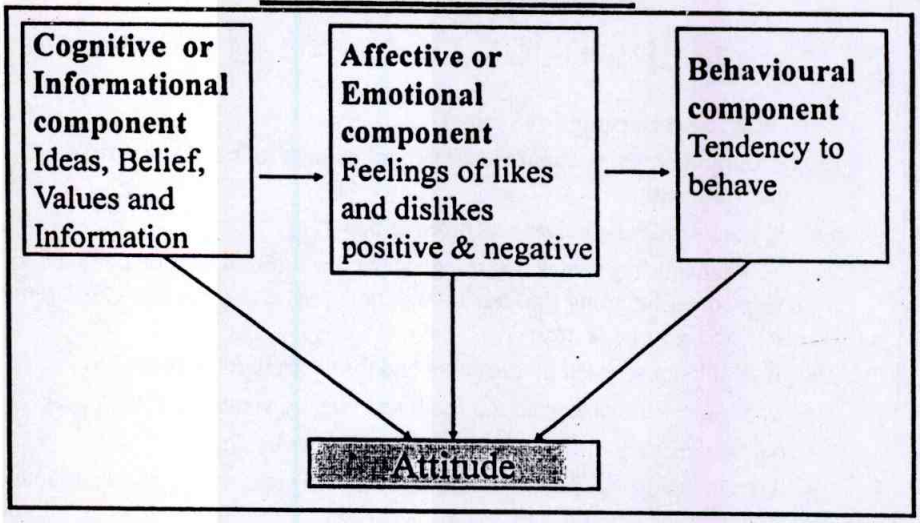


Table talk: influences on attitude

- **Home :** Positive or negative influences.
- **College:** Peer pressures.
- **Work :** Supportive or over critical supervisor.
- **Media:** Television, Newspapers, Magazines, Radio, movies.
- **Cultural background.**
- **Traditions and Beliefs.**
- **Social Environment.**
- **Political Environment.**

Gratitude-Reach out & give back

Buzz Idea: Scrunch! (15 mins)

- i. Remind students about the classroom being a safe and supportive environment
- ii. Each student receives one piece of paper
- iii. Each student writes two things about himself and one idea on how to help someone going through a tough time *(eg, give them a hug, ask if they are ok?, go online etc)*
- iv. Students scrunch up the paper and throw around the room
- v. Students move around the room and pick up someone else's paper
- vi. Students try to find who the piece of paper belongs to
- vii. Once each student finds the student who matches the paper, these two students form a pair
- viii. Students discuss what the other has written in regards to how they would help someone.
- ix. As a whole class, students offer their suggestions on how to help someone going through a tough time – write suggestions on the board

Feedback

- Was the content and activities satisfactory to give an idea about attitude and gratitude
- Will maintaining '***Gratitude Journal***' help you in inculcating positive values?
- Further suggestions for improvement

Worksheet
Attitude

Activity 1

1. What type of atmosphere/environment were you raised in: positive, negative, perfect, or "contradictory?" Describe it.
2. What are some things you value about yourself?
3. Do you like yourself most of the time?
4. When do you feel best about yourself? Most fulfilled?
5. When do you feel "down" on yourself?
6. Choose an example from your life that fits a positive self esteem description. Recall in detail your thoughts, feelings and behaviors.
7. Now choose a situation from your life that fits a negative self-esteem description. Recall in detail your thoughts, feelings and behaviors.
8. Do you notice any change in your energy level, emotions, and bodily reactions when you think of the more positive situation? Describe this.
9. Do you notice any change in your energy level, emotions, and bodily reactions when you reach out to express thanks/gratefulness to others ? Describe.

Activity 2 : Personal Self Esteem Evaluation

Evaluate your self esteem using this scale:
5 = Always
4 = Most of the time
3 = Sometimes
2 = Rarely
1 = Never

____ 1. I feel successful in my present work/school activities.
____ 2. I feel satisfied with my present work/school path.
____ 3. I consider myself to be a risk taker.
____ 4. I feel that continuing my education is important.
____ 5. I consciously look for the good in others.
____ 6. I can do most everything I put my mind to.
____ 7. I am comfortable in new social situations.
____ 8. I appreciate compliments from others.

_____ 9. I feel comfortable speaking in front of others.
_____10. I enjoy telling others of my success.
_____11. I am an optimistic person.
_____12. I am goal-oriented.
_____13. I am comfortable making decisions.
_____14. I am in good physical condition.
_____15. I am respected by others for who I am.
_____16. I project a positive self-image.
_____17. I am an active listener.
_____18. I like being responsible for projects.
_____19. I enjoy controversial discussions.
_____20. I find obstacles challenging.
_____21. I am able to ask for help without feeling guilty.
_____22. I can laugh at my own mistakes.
_____23. I am responsible for my thoughts and actions.
_____24. I am direct when I voice my feelings.
_____25. I am leading a balanced life.
_____26. I am an enthusiastic person.
_____27. I use eye contact when talking to others.
_____28. I genuinely like myself for who I am.
_____29. I take criticism well and learn from it.
_____30. I exercise regularly and eat a balanced diet.

Add up your points and put the total here: _____
You score indicates:
120 - 150 = Very high self esteem
90 - 119 = Moderately high self esteem
60 - 89 = Average self esteem
31 - 59 = Moderately low self esteem
0 - 30 = Low self esteem

Activity 3 : Following the example below, change these negative statements to positive ones.

Example:

Negative Positive

Nothing ever goes my way! Sometimes things go my way; sometimes they don't.

1. People aren't trustworthy.

_____

2. You can't get good service these days._____

3. I can't ever get ahead._____

4. There's no justice in this world._____

Add some of your own statements below:

5. _____

6. _____

7. _____

8_____

Assertiveness

Assertiveness is your ability to act in harmony with your self-esteem without hurting others.

Anonymous

DEPARTMENT OF ENGLISH

Objectives

- Assertiveness Vs Aggressiveness
- To discover and foster behavioural patterns of of 'Assertiveness' among students

Points to discuss

- Direct, open & honest communication with others
- Asking for what you want & saying "no" to what you don't want
- Not negating, attacking or manipulating others
- Respecting the dignity of others while maintaining self-esteem
- Standing up for yourself & your rights

Feedback

- Do you now know the difference between aggressive and assertive behaviour/ attitude
- Can you diagnose your personality in terms of assertiveness or aggressiveness?
- Further suggestions for improvement

Handout Worksheet
Assertiveness

(Group/individual activity)
Structure your response to each scenario:

Example:
When you don't ask for my opinion and make decisions that affect both of us, I feel frustrated and unappreciated. Next time please include me in the decision-making. I hear two heads are better than one.

Scenario 1:
You are working on a large group project with a classmate. As group leader, you ask her to complete a specific part of the project and she hesitates. After you explain why you think she is the best person to complete this part of the project, she agrees, but then doesn't do it. However, what she does do is leave you a BBM apologizing, but it's too late, you had to complete the part
of the project she was assigned for her. You think she pretends to agree with you on work assignments, and then purposely leaves messages so she won't have to tell you no face-to face.
But you are getting frustrated because you want her to carry her own weight. Part two of the group project is just getting started and your classmate has just arrived to the meeting…

Scenario 2:
You have joined your faculty's student council. Because there are certain jobs no one on the council likes to do you're supposed to rotate who does them, including: cleaning up the office, who does the monthly inventory of faculty swag, and walking around the building removing old posters. A fellow student on the council always gets out of these tough and boring jobs. This particular council member always seems to have something else to do. At first his excuses seemed legitimate, but

now you're almost certain he is making stuff up, and taking advantage of your kindness. You are both hanging out in the council office before class…

Scenario 3:
You usually feel really lucky. You were assigned an awesome roommate in hostel, and everyone else on your floor thinks so too. You get along great, are in some of the same classes, and watch the same TV shows. But your roommate seems to have a lot more spare time than you do. In fact, he regularly gives you a hard time when you try and stay in to study.
He thinks you work too hard and should go to more parties. His motto is "who needs an A when you just need to pass". He has just come home from class and wants you to forget about studying for tomorrow's midterm and go for a movie-show.

Scenario 4:
You've been having a hard time wrapping your head around a concept in class. This is not the first time you've had this problem, but prior to the midterm you did nothing about it and your grade was affected. Many of your classmates have commented on how tough, impatient, and intimidating the Professor is. You think meeting with your Professor to ask some questions would clarify the concept and help you in the long run, but you are extremely nervous that the Professor will think you are wasting his time. You have arrived at class early and no one is there yet except the Professor.

Session- 4

- Time Management
- Team Building
- Worksheets
- Video

Team building

None of us is as smart as all of us .

Ken Blanchard

DEPARTMENT OF ENGLISH

Objectives

- Learning techniques for building a better team.
- Understanding your style and role as a team builder .
- Practicing , discussing , and solving problems.

Points to discuss

Conceptions of Team

- **The Athletic Perspective**
- **The Power of Two**
- **Circumstantial**
- **The Community Approach**

Why teams are needed?

- To solve problems by drawing on the talents of variety of individuals.
- To foster togetherness in the workplace while tackling projects.
- To reduce or eliminate a lack of communication among staff members on projects.
- To heighten productivity by encouraging an atmosphere of cooperation.
- To achieve a solution that might be unpopular to some but is the desire of the majority.

A good team builder should……

- Establish a purpose that unifies team members
- Select motivated and skilled team members and team leader
- Determine the roles of each team member
- Mandate commitment of each team member .
- Empathize with each team member.

Feedback

Were the content and activities satisfactory?

Worksheet

Team Building

Activity 1

Paper and straws Game

This planning game is ideal for small groups and only requires drinking straws and some paper. The group leader needs to draw a large circle on a large piece of paper with concentric circles within it. Then, each circle must be assigned a score, with the biggest score being saved for the smallest, middle circle. This paper is taped onto the middle of a large desk. Then, each participant must gather around the table and be given a drinking straw. The group leader will make dime-sized balls by wadding up bits of paper. It is up to the group leader how many balls will be in play. The participants must blow into their drinking straws to push the balls around. It sounds easy, but as more balls come into play, the participants must plan with their coworkers how they will push balls into high-scoring sections without moving balls that are already in place. This may require re-positioning themselves in different locations around the table or having different players blow in different directions; it's up to the participants to create their plan of attack. The group leader can end the game once they've reached a specific score or once each ball is in the middle. These simple team building exercises helps coworkers work together to create and follow through with a plan and it also encourages them to communicate.

Activity 2

Form a team for the following tasks:

1. Investigation: To investigate the mystery of ghosts in Bhangarh.

2. How to form a cabinet.

3. Reshaping or restructuring SKIT.

Time -Management

Importance of Time

ONE YEAR, ask a student who failed a grade.

ONE MONTH, ask a mother who gave birth to a premature baby.

ONE WEEK, ask the editor of a weekly newspaper.

ONE DAY, ask a daily wage laborer with kids to feed.

ONE HOUR, ask the lovers who are waiting to meet.

ONE MINUTE, ask a person who missed the train.

ONE SECOND, ask a person who just avoided an accident.

ONE MILLISECOND, ask the person who won a silver medal in the Olympics.

DEPARTMENT OF ENGLISH

1

Objectives

Define the key concepts associated with Time Management

Identify the main obstacles to effective Time Management and to maintain a planner

Understand the nature of Time Management

2

Points to discuss

Time is equal to all ,some progress others .....

24 hours per day
X
60 minutes per hour
X
60 seconds per minute
=
86,400 Seconds

3

Beware of distractions

- Talking with friends
- Talking on telephone
- Daydreaming
- Watching television
- Excessive Sleeping
- Listening to music
- Drop-in visitors
- Partying and goofing around
- Procrastinating or worrying
- Doodling

Ask Questions

- Why am I doing this?
- What is the goal?
- Why will I succeed?
- What happens if I choose not to do it?
-

4

Course Objectives:

- To sensitize the students to the contents of soft skills through instruction, knowledge acquisition, and practice.
- To bring about a shift in the behavioral mechanisms of the students and enable them to perform better academically, at work and in their personal lives.
- To equip students with the necessary employability skills to make their transition from college to the workplace a smooth one.
- To help them develop LSRW skills and communicate effectively
- To develop the reading skill of the learners and cultivate the habit of reading in them.
- To hone the communicative skills of the students through classroom activities and text-based learning.
- To make them understand the nuances of creative writing, thereby imparting skills for self-realization.

Course Methodology:

- Activity based learning, task based learning to be encouraged through exercises that involve comprehension, interpretation, extension activities and imagination.
- Audio/Video/Slide Shows, Brainstorming, Chart Preparation, Creative Writing, Dictionary activities , Drawing web-chart/ flow-chart, Group Discussions, Interviewing, Mind-mapping Newspaper reading, Reporter's questions, Role Plays, Pictogram, Sharing one's own experience, Speech presentation, Story-telling. Documentary film screening, Projects and assignments, Online activities, PowerPoint presentations, Activities based on news items from newspapers, Group/Pair/Individual work and Reading Sessions

Course Evaluation:

The learners are to be evaluated :
Continuous Assessment:

- Written Tests through worksheets.
- Power Point presentations.
- Group presentations.
- Viva voce.

Models & Communicat: An Intersectiai
& Rhetoric & Praxis
Pedagogies.

9 projects from the Department of Electrical Engineering were displayed by students in Technical Fest, organized by E-Cell on 6 March 2014. The projects were appreciated by the guests.

6. **Project making competition- detail still awaited**
7. **Faculty and Student Coordinators (Electrical Technical Club)**

The Faculty coordinators are Smriti Jain(Reader. EE) and Shobhit Ahuja(Lecturer. EE).The student coordinators of the Electrical Technical Club for session 2013-14(Even Sem.) are Anurag Kaushik (III Year, EE) and Bharti Krishna (III Year, EE). The student volunteers are Ayush Dubey (I Year, EE), Ayush Goyal (I Year,EE), Ronak Jain (I Year, EE), Ajay Prajapat (I Year, EE).

8. **Student selection in GATE**

The following students of Electrical Engineering scored positions in GATE 2014 (Graduate Aptitude Test of Engineering)

S.N.	Student Name	Year	AIR
1	Kuldeep Kaushik	IV	6
2	Rahul Gangwani	IV	1128
3	Vishal Verma	IV	1469
4	Rituraj	IV	3208
5	Vipin Katara	IV	5224

9. **Inter College Project Competition winners.**
   a. Bharti Krishna(III Yr, EE), Divya Jain(III Yr. EE), Ayushi Gupta(III Yr. EE), Gaurav Khatri(III Yr, EE), Gaurav Mehra(III Yr, ME)- Participated and secured I position in the project competition 'Human Casualties Avoider', in the National Level Project Exhibition Competition, 'PRATIKRUTI', held at YCCE (Yeshwantrao Chavan College of Engineering), Nagpur
   b. SKIT Team – Participated and secured 2nd Runner-Up position in ASME SDC (Student Design Competition), held at BITS Pilani's annual technical innovation festival, Quark 2014, from 28- 30 March 2014.

Industrial tour

For: III Year
Date:16 - 21 february 2014
Industries:Bharat Heavy Electrical Limited, Haridwar,Chilla Hydroelectric Power Plant India. Haridwar, Parle Biscuits Private Limited, Neemrana
Supervised by:Jitendra Sharma, Shobhit Ahuja, Manish Naulakha , Himanshi Saini ,Lecturer, Dept. of EE

The process of TM starts with-

- ❖Costing your time
- ❖ Planning Effectively
- ❖Setting goals and objectives
- ❖Setting deadlines
- ❖Delegating responsibilities
- ❖Prioritizing activities as per their importance
- ❖Spending the right time on the right activity

5

Feedback

1. Does the content justify the objectives?
2. Will you maintain a planner from now onwards?
3. Do you think this session is going to help you in saving your time and increasing your efficiency?
4. Further suggestions for improvement .

6

Worksheet

Time Management

Activity 1

Enlist your tasks for coming week and prioritize them according to the instructions given below.

Priority	Task details/Time allotted for each task

1 = Urgent and important - These activities are important because they fulfill your key responsibilities (Step 2), but are also urgent because a deadline is attached
2 = Important but not urgent - These are items that fit into your long-range plan. They may be put off for a time but should reappear later as a 1
3 = Not urgent or important - These may be quick and easy items that give you a sense of accomplishment
4 = Should be done by someone else - Analyze your activities to see what you can delegate

Activity 2. Rank the following pursuits in order of importance to you.

- ⊙ ___ Class attendance
- ⊙ ____ Relaxation
- ⊙ ____ Volunteer service
- ⊙ ____ Time with family
- ⊙ ____ Exercise
- ⊙ ____ Clubs/organizations
- ⊙ ____ Required reading
- ⊙ ____ Hobbies or entertainment
- ⊙ ____ Time with girlfriend/boyfriend or spouse
- ⊙ ____ Studying
- ⊙ ____ Religious activities
- ⊙ ____ Shopping
- ⊙ ____ Grocery shopping
- ⊙ ____ Preparing meals
- ⊙ ____ House-cleaning
- ⊙ ____ Non-required reading
- ⊙ ____ Sleeping
- ⊙ ____ Other: _____

Activity 3. Weekly Time investment for Personal Needs, Classes, Job, Family Responsibilities, and Commuting

DAILY

- Number of hours you need to sleep _____X7
- Number of hours spent at work _____X7
- Number of hours spent in class _____X7
- Number of hours spent commuting _____X7
- Number of hours used for meals _____X7
- Number of hours used for personal grooming _____X7
- Number of hours spent on household duties _____X7
- Number of hours spent for church/volunteering _____X7
- Number of hours spent on computers
- Number of hours spent on social networking
- 7 days x 24 hours = 168 (Total hours per week) minus _____ (Total number of hours for personal needs =
- Number of hours available for study and leisure _____

TIME MANAGEMENT WORKSHEET

TTIME	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Session- 5

- Leadership Skills
- Decision Making
- Worksheets
- Video

Leadership Skills

A leader is one who knows the way ,goes the way and shows the way

John Maxwell

DEPARTMENT OF ENGLISH

Objective

- To inculcate leadership skills.
- To make students aware about their leadership traits

Points to discuss

Do you think a good leader should ----

- **Have a clear vision**
- **Criticize**
- **Know and utilize his/her strengths and gifts.**
- **Set definitive goals and follow concrete action plans.**
- **Blame others**
- **Maintain a positive attitude.**
- **Empathize**
- **Organize & motivate others**
- **Be irresponsible**
- **Be willing to admit and learn from failures and weaknesses.**

Identify traits

Feedback

- Did this session help you in exploring some of your leadership qualities?
- Further suggestions

Decision Making

Once you make a decision the whole universe conspires to make it happen

Ralph Waldo Emerson

DEPARTMENT OF ENGLISH

Objective

- To inculcate decision making skills.
- To introduce and encourage to maintain a 'Decision journal'

Decision making

4 steps in decision-making

- **VISUALIZE SITUATION:** A situation has an invisible "stop sign." Stop, think, then act.
- **THINK:** Teenagers need to think about all the possible choices they have in a specific situation. Then they need to consider the possible consequences of each choice.
- **DECIDE:** After thinking about all their choices and the possible consequences of each choice, they need to decide what to do.
- **EVALUATE YOUR DECISION:** Some decisions are just ***fine.*** Others will be ***"okay,"*** but not great. "Okay" decisions probably would have turned out better if they had spent more time thinking through the consequences.

Teenager behaviour pattern

Teenagers learn to make good decisions when they understand which ones get them more of what they want, and which ones result in more of what they don't want.

Teenagers want:	**Teenagers don't want:**
1. More fun	Arguments with parents
2. More independence	Conflicts with peers
3. More time with friends .	Social drama
4. More control over their daily lives	Loss of privileges
	Adults telling them what to do

Feedback

- Did this session help you in exploring some of your decision making skills?
- Did you find maintaining a decision journal, relevant in making decisions?
- Further suggestions for improvement

Worksheet

Leadership and Decision Making

Activity 1

Speed Dating

- The leader has the group randomly pair up. Once introductions between partners are made, the leader gives the group a topic to discuss with their partner for 30 seconds or so.
- At the end of the time, the leader will call for the group to switch partners and call out a new topic.
- Try to choose topics that are both fun and insightful. Examples include:
  - If you could have lunch with anyone from history, who would it be?
  - If you could be granted one wish, what would it be?
  - If you could go anywhere in the world, where would you go?
  - If you could be any animal, what would you be?
  - Describe your perfect day.
  - If you could eat one type of food for the rest of your life, what would it be?
  - If you were stranded on a deserted island, who are three people you would want with you?
  - Where's the prettiest place you've ever been?

http://www.ultimatecampresource.com/site/camp-activity/face-to-face.html

Activity 2

Completed Thought

- The group leader begins by stating that this learning experience is designed to explore the participants' thought processes. After giving each participant a pencil and a piece of paper, the trainer explains that the group members will be listening to a series of incomplete statements. The participants will be writing down the statement and then, using their own words, completing the thought. For example: "If I could be anyone, I would be ____."
- The leader then reads the first incomplete sentence to the participants. After giving the group members one minute to copy down and then complete the thought, the trainer proceeds to the second statement, continuing the aforementioned process until the participants have completed all 10 statements.
- When the participants have finished, the trainer rereads the statements one at a time and asks each group member to share his or her responses with the group. At any interval, the group members may discuss or question the rationale for a participants' response.
- The trainer may conclude the activity by discussing the similarities and differences among the group members' responses.

Activity 3

Everyone knows what decision-making is: making choices, solving problems, selecting the best alternative

Q: So what is a "good" decision?
A: One that works out well.
Q: Do good decisions always work out well?
A: Yeah, that's what a good decision is.
Q: But what does that mean, "works out well?"
A: Oh, I don't know; somebody gets what they want.
Q: What if the choice also brings things that aren't wanted?
A: Like buying a car that's cheaper but it might break down more?

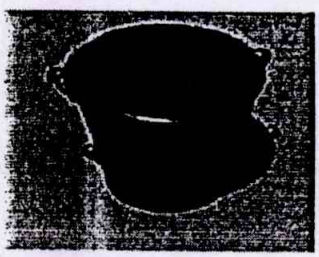
- Can you think of some situations you have to deal with at home or at school that seem to come at you 'out of the blue'?
- What about arriving for a class and discovering you have a substitute teacher you've had trouble with before? or Your friend is having a bad day and taking it out on you?" or "Getting home from school and dealing with a tired and grumpy parent? or A sibling who's being really annoying?

Activity 4

o Bucket Game

Good/Positive Feelings Bucket

Bad/Negative Feelings Bucket



Fill the following either in Good Feeling bucket or in Bad Feeling Bucket. You can also fill some other responding feelings:

If someone usually starts arguing when hearing a "No" answer, then ask, "If you start arguing with me when you hear a "No," what bucket do you feed?"

If one doesn't do chores or homework without being reminded, or nagged, ask, "If you did your chores (or homework) without being asked or me nagging you, what bucket would you feed?"

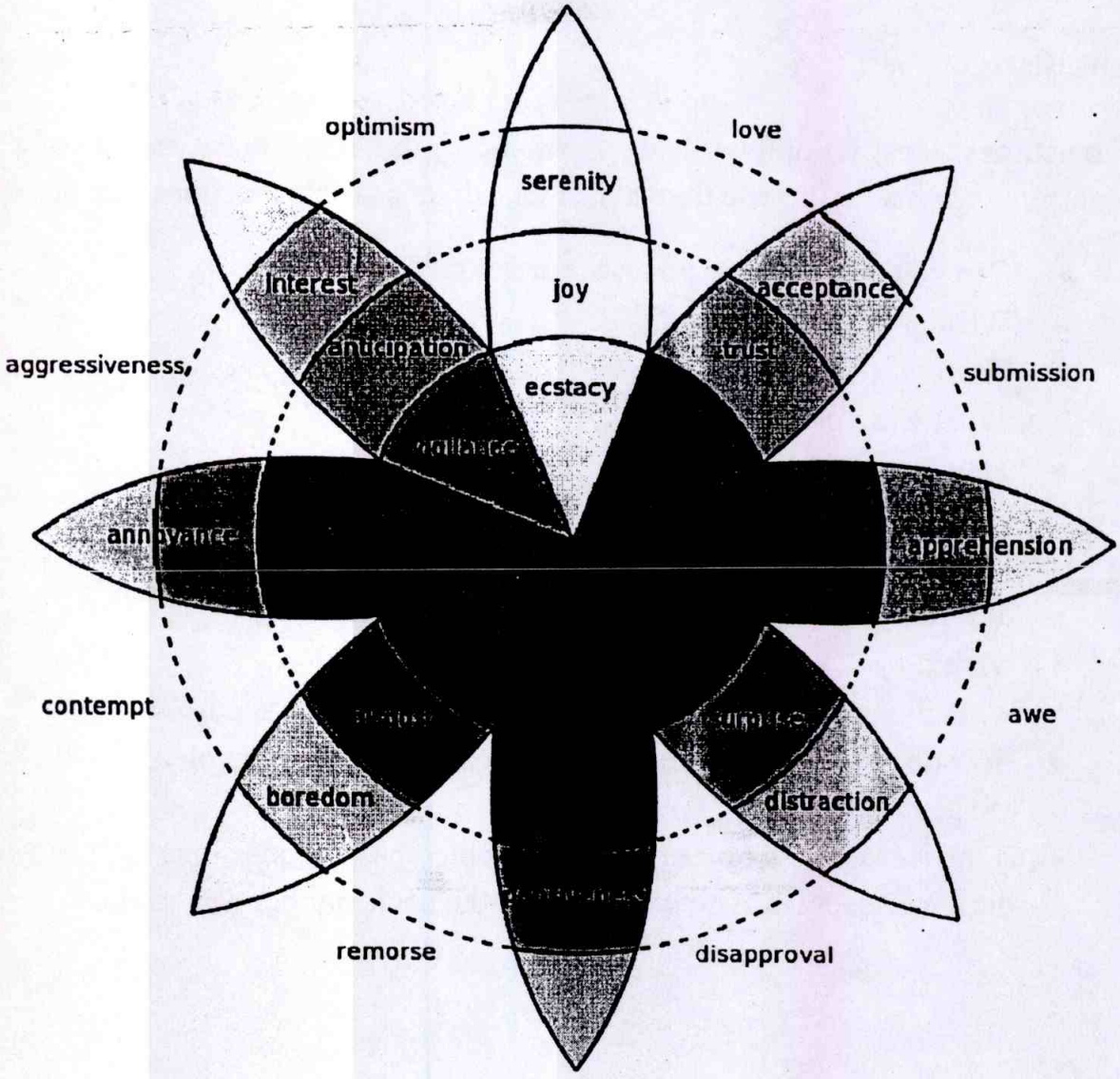
If your junior doesn't do what he or she is asked, without being told many, many times, then ask, "What bucket would you feed if you did what you were asked to do right away?"

And to really drive home the impact of feeding the "bad feelings" bucket, ask, "How many arguments with me would you eliminate if you accepted 'No' as my answer (or did your chores without being asked) (or did your homework without having to be nagged) (or did what you were asked to do right away)?"

One would probably say, "I can't guarantee you'll always get a 'Yes' if you feed my 'good feelings' bucket. I **can** guarantee you, if my 'bad feelings' bucket is overflowing, you'll probably hear a lot of 'No' answers when you want to do something."

Then say, "Less stress, happier parties, you get to do more."

You can return to the "good feelings–bad feelings" bucket imagery again and again by asking the party, "What bucket are you filling now?" This simple question quietly reminds other party that he/she can decide on a different choice that will get him/her more of what they want.


optimism
love
serenity
interest
joy
acceptance
anticipation
aggressiveness
ecstacy
submission
annoyance
apprehension
contempt
awe
boredom
distraction
remorse
disapproval

Activity 5

Decision Journal:

Sometimes teenagers only write down what they did, like a diary, instead of a decision they made. If these things happen, adults can ask questions like these:

- "Can you tell me more about the situation?"
- "What were your choices?"
- "What was your thinking?"
- "What was your decision?"
- "How do you think your decision turned out?"

The goal is always to help teenagers learn from a mistake.

- What do you think you could have done differently?
- What do you wish you had done differently?
- What did you need to consider that you didn't think about?
- How do you think your decision turned out? Or are you pleased with how things turned out?
- If the teenager isn't pleased with the outcome, ask questions 1, 2, or 3 to help the adolescent learn how to evaluate the decision that was made.

Session- 6

- Analytical Skills
- Critical Skills
- Worksheets
- Video

Critical and Analytical Thinking

__Read__ not to contradict and confute; nor to believe and take for granted ;nor to find talk and discourse but to __weigh__ and __consider__

Francis Bacon

DEPARTMENT OF ENGLISH

Objective

- To enhance…
  - ➢Critical thinking
  - ➢ Creative thinking
  - ➢Analytical thinking.

Introduction

- Critical Thinking: "What" and "Why"
- "Critical," is derived from the Greek word *krisis, which means "to separate."*
- Predicated on accurately identifying the problem. Input enhances the likelihood that outputs will be positive.
- Focus on improved outcomes that are faster, better, cheaper and of higher quality

Points to discuss

- **Critical Thinking:** It enables one person to respond to an unexpected prompt fluidly and flawlessly.
- **Creative Thinking:** Indicates how to strip away layers of self-doubt, self-criticism, and self-cynicism in order to re-discover one's creative cores.
- **Analytical Thinking:** Employs tools for solving problems logically based on the scientific approach of **defining** the problem, **generating a list** of possible solutions, **selecting a solution**, and then **implementing, evaluating**, and **making adjustments/ decisions**

Feedback

- Did you find the content & activities interesting?
- Did it help you in thinking critically and analytically ?
- Further suggestions for improvement

Worksheet

Critical and Analytical Thinking

Key Decision-Making Factors

- Establishing the decision context
- Identifying values
- Understanding uncertainty
- Structuring consequences
- Quality of information
- Creating alternatives
- Group negotiations

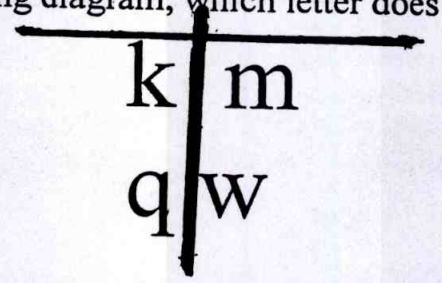
Activity 1

The following combination of letters represents a sentence from which one particular vowel has been removed. If you can figure out what that vowel is and re-insert it eleven times, in eleven different places, you will be able to determine what the sentence is saying.

VRYFINXMP
LARXCDSW
HATWXPCT

Activity 2

In the following diagram, which letter does not belong?



Call on various participants to explain their answers and then give the correct one: The letter "t," which most people don't even "see," is out of place because it is bigger, thicker, and of a different color than the other letters.

Solution activity 1."Every fine exemplar exceeds what we expect."

Activity 3

Divide the class into small groups of four or five and give each team a sheet of chart paper. Have each group identify a problem at the top of the chart paper and report its current and ideal states. They should report the problem that they face currently at workplace ,environment and society. Give each group another group's chart paper and ask members to list both the Driving and the Restraining forces for the problem listed.

After about 15 minutes, return the papers to the original groups and ask them to add further Driving and Restraining forces and then to select the one force (in either column) that—if they could direct their energies to it—they think could most effect the ideal solution.

Call on a spokesperson from each team to report on their selection. For instance the issue of literacy

Current state:
20% illiteracy

Ideal state:
100% literacy

Driving Forces (+)
List of topics

- Government intervention
- Volunteer program
- Public service ads
- Games and sports
- Involvement of business community
- Busy lives
- Too much television
- High dropout rates
- Corruption
- Immigration
- Brain drain

Restraining Forces (-)

Extending the Activity:

- Have participants interview one another to learn what special talents/knowledge/abilities they have.

Ask the students, "What is the greatest contribution you can make to this organization?" Encourage them (in pairs) to at least ask the question to team members with whom they work and tell the others members/ class.

Activity 4
News paper

- Have a current copy of the local newspaper available. Distribute a section or several pages to each group. Ask them to identify a lively solution for the problem.

- Discuss the simple technique of *personification,* which makes an inanimate object come alive. Extend the discussion to workplace situations by asking participants to first list issues that concern them, and then to regard those issues from a new perspective by completing one or more of the following prompts:

✓ "If this problem could talk, it would say…"
✓ "If this problem could think, it would realize…"
✓ "If this problem could hear, it would have known…"
✓ "If this problem could create, it would have made…"
✓ "If this problem could be dressed, it would look like…"

Session- 7

Panel Discussions

Session- 8

- Life skills & Values
- Worksheets
- Video

Life Skills and Values

Learn to love without condition
Talk without bad intention
Give without any reason and
most of all
care for people without any expectation

DEPARTMENT OF ENGLISH

Objectives

- To develop a sense of responsibility towards Self, people and communities.
- To promote co-existence, tolerance and the creative participation in diverse groups
- To inculcate at least two values among the participants.

Introduction

- Life Skills are a category of soft skills that are needed to successfully navigate the challenges of daily life. They include the ability to set and achieve goals, make decisions, be accountable, solve problems, and effectively manage one's time.

Points to discuss

Personal abilities

- Skills for increasing self-control
- Self esteem/confidence building skills
- Self awareness skills including awareness of rights, influences, values, attitudes,
  strengths and weaknesses
- **Goal setting skills**
- Self evaluation/self assessment/self-monitoring skills
- **Skills for managing feelings**
- Anger management
- Dealing with grief and anxiety
- Coping skills for dealing with loss, abuse, trauma
- Skills for managing stress
- Time management
- Positive thinking
- Relaxation technique

Contd...

- **Learning to live together - interpersonal abilities**
  - Interpersonal communication skills
  - Verbal/Non verbal communication
  - Active listening
  - Expressing feelings; give feedback (without blaming) and receiving feedback
  - conflict management

Feedback

- Did you find the content and activities relevant?
- Did it develop your understanding of values and life skills ?
- Which two values / skills have you imbibed and will practice in life?
- Further suggestions for improvement

Session- 9

- History & Mythology
- Worksheets
- Video

HISTORY & MYTHS

History makes a man wise.

Francis Bacon

Myths are public dreams, dreams are private myths.

Joseph Campbell

DEPARTMENT OF ENGLISH

Objectives

✓To apprise the students about origin of the world according to different mythologies and science .

✓To make them aware of key words of diverse mythologies.

✓To inculcate significant values from historical / mythical characters .

Points to discuss

Creation of the world

- Hindu Myth
- Christian Myth
- Islamic Myth
- Big Bang Theory

Key words from mythologies

- **Atlas**: A mythical giant who supported the heavens on his shoulders. (The book of maps known as an atlas is named after a legendary African king, sometimes thought to be descended from the Atlas of Greek myth.)
- **Hercules**: Also known as Heracles, the greatest hero of Greece. (A particularly great exertion is said to be a Herculean effort.)
- **Titans**: An ancient race of giants who were overcome by Zeus in a struggle that shook the world. (Titanic)

Contd...

- **Brahma-** Creator God
- **Varuna-** god of water
- **Marut-** god of wind
- **Indra-** god of storms and rain
- **Allah-** God of Islam
- **Anu-** chief creator and sky god
- **Enlil-** god of wind
- **Enki-** god associated with water, storms

Kumbh Mela gathering visible from space. The 2011 Kumbh Mela was the largest gathering of people with over 75 million pilgrims. The gathering was so huge that the crowd was visible from space.

Bhangarh

Feedback

- Have you gained an insight about the origin of world? You can also explore more myths .
- Have you been able to extract some significant values/ symbols from the key words ?
- Further suggestions for improvement .

Worksheet

History and Mythology

Activity 1

Watch the video and answer the following questions:

Q1. Where did Kartikeya fly ?
Q2. Who are the parents of Ganesha?
Q3. What are the differences between the world and my world in the video?
Q4. Where did Bharat go to hoist his flag and what did he find there?
Q5. Why did Bharat feel insignificant?
Q6. Does belief influence behavior?
Q7. What kind of sensitivity is required for success?
Q8. What kind of life do you want to live? Whether dynamic or static.

Handout

Three Case Studies of Interview

Anuj-	Vishal	Remo
(First Impression) • *Panting, just in time, nervous(sweating)* • *Red shirt, crushed trousers, unclean gladiators* • *No documents, no greetings, sat on the eye of chair, clearing/ fidgeting hands head bent, no eye contact.*	• Punctilious by nature, well ahead of time. • Had all important documents, CV, in a folder. • Professional dress -white shirt, black suit, polished black shoes/ socks. • Asked permission to enter/sit, greeted everybody shook hands, cheerful, alert confident, not stiff, eye contact.	• Enthusiastic smiling happy-go- lucky. • Had CV- no documents. • Bright yellow shirt, light grey trousers dark blue blazer. • Took permission, warm greetings/ hand shake. • Commented on weather. Not tense.
(Personality & Soft skills) • *Ultimately calmed down, pronunciation/articulation average. Started stammering as the interview progressed* • *Contested & argued the perspective of interview board.* • *Sometimes on the verge of thumping /table to assert*	• Fluent, clear accent tone-modulations. • Expressed views politely but also emphasized discernment • Related his communication/ tech. skills discreetly.	• Body language, accented articulation too formal. Used collogued phrases. • Not a good listener, interrupted between the Q. To show his knowledge. • Shortly, turned sideways- one arm resting on back of the chair lending casual approach.
(Hard Skills) • *Sound knowledge of interview topic, but could not understand/ reply the Q. because of anxiety* • *Interviewers repeated Q. to bring him back on the track/normalcy.* • *Minor arguments led to tension.*	• Reasonable (though not in-depth) knowledge of domain. • Was able to 'work-it out' when did not know correct answer. • Remained polite, kept professional & respectful attitude.	• Casual, superfluous knowledge of topic. • Initial charming, witty responses. • Shallowness exposed during deep analytical questions. • Equally shallow & casual in multi-domain questions.
(Concluding Interview) • *Anuj stood up on his own, hurried (as if relieved of an ordeal)* • *Moved chair back-screeching sound.* • *Left room without greeting, nosily shut the door behind.* • *Made a request to consider him favourably because he desperately needed the job.*	• Vishal asked Ans. of queries which he could not answer earlier-Led to lively discussion • Left room by thanking the Board and wished them Good Day. • Replaced the chair-shut the door gently behind.	• Remo ended saying thanks, shook hands with each of them. • Asked how selection results would be conveyed. • Remarked confidently abt. an interesting event (remotely connects with the interview topic/ theme).