



*A
REPORT
ON*



*National Workshop on
'Linux' for Teachers
on*

23rd of August 2019

Under

*'Pandit Madan Mohan Malaviya National
Mission on Teachers and Teaching
(PMMMNMTT)',*

MHRD, Govt. of India

Conducted by

The Teaching Learning Centre (ICT),

Supported by FOSSEE & Spoken Tutorials

Jointly Organized by

IIT Bombay

&

*Swami Keshvanand Institute of Technology,
Management & Gramothan, Jaipur, Rajasthan*

Submitted by: Kailash Soni

Workshop Coordinator

Assistant Professor, Department of CSE

Index

- 1. About SKIT**
- 2. Introduction to 'Linux' Workshop**
- 3. Methodology of the Workshop**
- 4. Course Content**
- 5. Speaker of Workshop**
- 6. Eligibility for Workshop**
- 7. Duration and Venue**
- 8. Criteria for Certification**
- 9. Course Fee**
- 10. How to Apply**
- 11. Basic Information**
- 12. Address for Communication**
- 13. Brochure by IIT Bombay**
- 14. Brochure by SKIT**
- 15. Invitation by IIT**
- 16. Invitation by SKIT**
- 17. Workshop Schedule**
- 18. Sessions of Workshop:-**
 - 18.1 Session 1 (Ubuntu Linux on VirtualBox)**
 - 18.2 Session 2 (Linux)**
 - 18.3 Session 3 (Bash)**
 - 18.4 Session 4 (Linux for Sys Ads)**
- 19. Attendance Sheet**
- 20. Various Images for Publicity**
- 21. Glimpses of Workshop**
- 22. Words of Acknowledgement**

1. About SKIT:-

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) inspired from the learnings of Swami Keshvanand, was established in the year 2000 by Technocrats and Managers Society for Advanced Learning. Today the Institute is recognized as one of the centers of academic excellence in Northern India. The Institute is affiliated to Rajasthan Technical University, Kota for offering Postgraduate and Graduate Courses in Engineering and Management. Our sister institution Swami Keshvanand Institute of Pharmacy (SKIP) is affiliated to Rajasthan University of Health Sciences for offering Graduate Course in Pharmacy.

Located in the Pink City Jaipur, which is a blend of traditional history and modern outlook, SKIT is putting in efforts for making industry ready engineers and managers through effective Industry –Institute Interface. Apart from University curriculum SKIT also pursues activities for research and development in various fields.

The green landscaping, aesthetic elegance of arches and the vibrant pursuit of knowledge by the young aspirants make the environment serene, pleasant and dynamic.

Students joining the institute share the box full of opportunities for professional and personal development through an environment of practical orientation, industrial interaction and student led activities which help the students to develop good communication skills, integrated personality and greater competitive spirit.

Our Inspiration

"Mass illiteracy is the root cause behind backwardness of India. If we want speedy progress of nation we need to root it out as early as possible."

– Swami Keshvanand

Swami Keshvanand, an orphan, illiterate, nomadic man who never received formal education, was the founder of more than 300 schools, 50 hostels and innumerable libraries, social service centers and museums. Swami Keshvanand had a deep understanding of the rural society of the desert region. He had explained the peculiarities of the desert region, identified the problems and suggested appropriate and logical solutions. It was Swami Keshvanand's lifelong endeavour to eradicate social evils like untouchability, illiteracy, child marriage, indebtedness, poverty, backwardness, alcohol abuse, moral dissipation etc.

Vision

To promote higher learning in advanced technology and industrial research to make our country a global player

Mission

To promote quality education, training and research in the field of Engineering by establishing effective interface with industry and to encourage faculty to undertake industry sponsored projects for students.

Quality Policy

We are committed to 'achievement of quality' as an integral part of our institutional policy by continuous self-evaluation and striving to improve ourselves.

Institute would pursue quality in

- All its endeavours like admissions, teaching- learning processes, examinations, extra and co-curricular activities, industry institution interaction, research & development, continuing education, and consultancy.
- Functional areas like teaching departments, Training & Placement Cell, library, administrative office, accounts office, hostels, canteen, security services, transport, maintenance section and all other services.”

2. Introduction to 'Linux' workshop:-

IIT Bombay has conducted many large-scale teacher training workshops under the Train 10,000 Teachers (T10KT) programme, sponsored by the National Mission on Education through ICT (NMEICT), MHRD, Govt. of India, and trained over 2,00,000 teachers.

Another successful technology developed at IIT Bombay is Spoken Tutorial, using which about 50 lakh students have been trained on various ICT topics. The Spoken Tutorial project is also implemented successfully at IIT Bombay, with funding from NMEICT, MHRD.

It is now proposed to offer the highly effective Spoken Tutorial based ICT training to a large number of teachers, across the country, through the T10KT methodology, with **Linux** training being taken up next.

Linux is one of the most popular Operating Systems used today. Linux refers to the family of Unix-like computer operating systems that use the Linux kernel. It can be installed on a wide variety of computer hardware, ranging from mobile phones, tablet computers and video game consoles to mainframes and supercomputers.

Linux is an open source software and the Linux kernel is released under the GNU General Public License and hence can be freely created, modified and redistributed.

Linux is actually just a kernel. Many people have put together distributions (often called flavors), that contain not just the kernel but also many other programming tools and utilities. Some well-known distributions include Red Hat Linux, Ubuntu, SuSE Linux, and Debian GNU/Linux.

The real power of Linux can be tapped by using its wide and powerful storehouse of commands that can be typed in the terminal. The reason behind this is the fact that Linux can trace its intellectual heritage, if not its source code, to the Unix OS. Unix was developed much before GUI environments were dreamt of. Thus, Unix (and hence Linux) provides a wide array of flexible text-mode commands.

Linux is now used in all major software projects undertaken by the Indian Government. Some of the examples are GST, Aadhar, and NEFT. Naturally, the employment potential of students who are good in Linux is very high.

The FOSSEE project at IIT Bombay (<https://fossee.in>) has been promoting Linux, and other FLOSS (Free/Libre and Open Source Software), such as Scilab, Python, OpenFOAM, eSim, Osdag, OpenModelica, DWSIM, Drupal and R, and Open Source hardware, such as Arduino and OpenPLC. FOSSEE is also funded by NMEICT, MHRD.

The Linux workshop is organised by the Teaching Learning Centre (TLC) at IIT Bombay, funded by the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) , MHRD, Govt. of India. As Spoken Tutorial method offers hands on practice, with 100% active learning, those who undergo this training will be able to start using Linux immediately after the workshop. They will also be able to conduct Linux workshops for their students, using Spoken Tutorials, without requiring any help from anyone else.

The one day Linux workshop will be conducted on Friday, 23 August 2019, through the select Remote Centres of IIT Bombay. This will be a blended training programme that uses A-VIEW for live interactions and Spoken Tutorials to learn to use Linux. The medium of instruction for this workshop is English.

3. Methodology of the Workshop:-

It was a one day workshop, hold on 23 August 2019. All participants reported their selected Remote Centre. They will learn Linux through the active method of reproducing every command demonstrated in the award-winning Spoken Tutorials. As learning happens through self-learning, the self-confidence of the learners is very high. Moreover, they can use the same method to train their students on the important topic of Linux, using Spoken Tutorials.

All the participants, from all the Remote Centres, will be able to interact with the Linux team at IIT Bombay, ask them questions, etc. through the video conferencing software A-VIEW. There will be about 4 to 5 hours available for Linux training and 2 hours for interactions.

A timed discussion forum <https://forums.spoken-tutorial.org/> will be used to answer the questions that the participants may have in different Remote Centres. One has to select the Spoken Tutorial, and the exact time (minute and second) when the doubt arises. It will be answered immediately by one of the volunteers. Answers can also be provided by other participants in the same Remote Centre or in other Centres. These answers double as additional learning material. Course Coordinators at Remote Centres, already trained for this purpose, ensure that workshop goes through smoothly.

Using this approach, we have trained 3,500, 4,200, 4,300, and 5,300 teachers, respectively, on Koha, Moodle, Scilab, and Python, in the past 9 months.

4. Course content:-

Depending on the level of the user, one can learn any/all of the topics mentioned below. If one cannot complete all the topics, one can complete them later on, through self-learning, as all required Spoken Tutorials are freely available.

Linux: Ubuntu Desktop, Desktop Customization, Installing software in Ubuntu Linux, Basic Commands, General Purpose Utilities, File System, Working With Regular Files, File Attributes, Redirection Pipes, Basics of System Administration.

Bash: Introduction to Bash shell scripting, Basics of Shell Scripting, Command line arguments and Quoting, Globbing and Export command, Array operations in Bash, More on Arrays, Conditional execution, Nested and multilevel if elsif statements, Logical Operators.

Linux for Sys Ads: Creating a user account, Assigning Groups on User Creation, User Password management, Modifying User Account, Group Password and Login, Administrating Group with gpasswd Command, Modifying and Deleting Groups.

A Linux Virtual Box and relevant tutorials will be made available to all learners at the chosen Remote Centre. More Linux tutorials are available at <https://spoken-tutorial.org> .

The FOSSEE team has taken up the effort to promote Linux in colleges all over India. We help you to migrate your CS/IT course labs to Open source software labs on the Linux Operating System. If interested, please write to us at info@fossee.in .

5. Speaker of Workshop:-

- Prof. Kumar Appaiah , Department of Electrical Engineering, IIT Bombay
- System Administrators, FOSSEE and Spoken Tutorial, IIT Bombay

6. Eligibility for Workshop:-

As this workshop is not subject-specific, teaching faculty from all domains (engineering, sciences), and polytechnic colleges, and PGT of schools, can attend. Teachers registered in a Masters or a PhD programme, during their employment as a teacher, can also participate.

7. Duration and Venue:-

The workshop was conducted on Friday, 23 August 2019 from 9.30 AM to 6.00 PM at CL-18 lab, CS Bock, SKIT (Remote Centre of IIT Bombay). This workshop was conducted through a blended mode, using both live video conferencing facility (A-VIEW) and hands-on sessions using Spoken Tutorials.

8. Criteria for Certification:-

E-certificate will be provided to the participants after successful completion of the workshop and filling up the feedback form

9. Course Fee:-

For SKIT staff **Rs. 100** (course fee to IIT Bombay) + **Rs. 50** (On 4 may to Remote Center)*,

For other **Rs. 100** (course fee to IIT Bombay) + **Rs. 400** (On 4 may to Remote Center)*.

Please note that the registration fee once paid is neither refundable nor adjustable under any circumstances.

(* To defray the cost of organising the workshop, lunch, and coffee/tea)

10. How to Apply:-

Enrollment will be strictly online, and no other mode of application will be entertained. **The last date of registration was 22 August 2019, 12.30 pm.** The URL for registration is: <http://www.it.iitb.ac.in/nmeict/workshopContent.html?workshopid=cvCcqusnXUHEd8JY5ih0Rg>

If you are a new user on this website then please complete the [Sign up](#)

Register on the Spoken Tutorial Website:

1. Before the workshop, participants should register on <https://spoken-tutorial.org/>
2. Fill up the registration form and submit.
3. An email will be received.
4. The account should be activated by clicking the link in the email.
5. The Username and Password should be noted. This is an extremely important step.
6. One needs the above information to post questions on the forum, which will be explained at the time of the workshop.

11. Basic Information:-

- Neither IIT Bombay nor the Remote Centre will bear the travel expense of the participating representatives. There shall also be no accommodation provided to the participants.
- All participants are required to bring **ear phones**, as they will have to listen to video tutorials. Without ear phones, the workshop will not at all be effective.
- Computers to practise Spoken Tutorials and to learn Linux will be available at the Remote Centres. But if they wish, participants can bring their own laptops with Linux installed.

12. Address for Communication:-

At IIT Bombay:-

Dr. Kalpana Kannan

Project Coordinator, ESOS Project

Department of CSE, Kanwal Rekhi Building,

Indian Institute of Technology Bombay,

Mumbai - 400 076.

Tel.: +91-22-2576 4989 and Fax: +91-22-2572 0022

Email: eoutreach@it.iitb.ac.in and Website - www.it.iitb.ac.in/nmeict

At SKIT Jaipur:-

Mr. Kailash Soni

Workshop Coordinator,

Assistant Professor Dept. of CSE (SKIT)

Mob. 9460066186 and 0141-5160400

Email: kailash100ni.er@gmail.com and Website - www.skit.ac.in

13. Brochure by IIT Bombay:-

1. Introduction

IIT Bombay has conducted many large-scale teacher training workshops under the Train 10,000 Teachers (T10KT) programme, sponsored by the National Mission on Education through ICT (NMEICT), MHRD, Govt. of India, and trained over 2,00,000 teachers.

Another successful technology developed at IIT Bombay is Spoken Tutorial, using which about 50 lakh students have been trained on various ICT topics. The effectiveness of this method can be seen from the testimonials available here: <https://spoken-tutorial.org/testimonials/media/?foss-70> and the [TEDx talk](#). This project is funded by NMEICT, MHRD.

It is now proposed to offer the highly effective Spoken Tutorial based ICT training to a large number of teachers, across the country, through the T10KT methodology, with **Linux** training being taken up next.

Linux is one of the most popular Operating Systems used today. Linux refers to the family of Unix-like computer operating systems that use the Linux kernel. It can be installed on a wide variety of computer hardware, ranging from mobile phones, tablet computers and video game consoles to mainframes and supercomputers.

Linux is an open source software and the Linux kernel is released under the GNU General Public License and hence can be freely created, modified and redistributed.

Linux is actually just a kernel. Many people have put together distributions (often called flavors), that contain not just the kernel but also many other programming tools and utilities. Some well-known distributions include Red Hat Linux, Ubuntu, SuSE Linux, and Debian GNU/Linux.

The real power of Linux can be tapped by using its wide and powerful storehouse of commands that can be typed in the terminal. The reason behind this is the fact that Linux can trace its intellectual heritage, if not its source code, to the Unix OS. Unix was developed much before GUI environments were dreamt of. Thus, Unix (and hence Linux) provides a wide array of flexible text-mode commands.

Linux is now used in all major software projects undertaken by the Indian Government. Some of the examples are GST,

Aadhar, and NEFT. Naturally, the employment potential of students who are good in Linux is very high.

The FOSSEE project at IIT Bombay (<https://fossee.in>) has been promoting Linux, and other FLOSS (Free/Libre and Open Source Software), such as Scilab, Python, OpenFOAM, eSim, Osdag, OpenModelica, DWSIM, Drupal and R, and Open Source hardware, such as Arduino and OpenPLC. FOSSEE is also funded by NMEICT, MHRD.

The Linux workshop is organised by the Teaching Learning Centre (TLC) at IIT Bombay, funded by the *Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMNMTT)*, MHRD, Govt. of India. As Spoken Tutorial method offers hands on practice, with 100% active learning, those who undergo this training will be able to start using Linux immediately after the workshop. They will also be able to conduct Linux workshops for their students, using Spoken Tutorials, without requiring any help from anyone else.

The one day Linux workshop will be conducted on **Friday, 23 August 2019**, through the select **Remote Centres** of IIT Bombay. This will be a blended training programme that uses A-VIEW for live interactions and Spoken Tutorials to learn to use Linux. The medium of instruction for this workshop is English.

2. Methodology of the Large-scale Workshop

It will be a one day workshop, on **23 August 2019**. All participants will have to go to their chosen Remote Centre. They will learn Linux through the active method of reproducing every command demonstrated in the award-winning Spoken Tutorials. As learning happens through self-learning, the self-confidence of the learners is very high. Moreover, they can use the same method to train their students on the important topic of Linux, using Spoken Tutorials.

All the participants, from all the Remote Centres, will be able to interact with the Linux team at IIT Bombay, ask them questions, etc. through the video conferencing software A-VIEW. There will be about 4 to 5 hours available for Linux training and 2 hours for interactions.

A timed discussion forum <https://forums.spoken-tutorial.org/> will be used to answer the questions that the participants may have in different Remote Centres. One has to select the

Spoken Tutorial, and the exact time (minute and second) when the doubt arises. It will be answered immediately by one of the volunteers. Answers can also be provided by other participants in the same Remote Centre or in other Centres. These answers double as additional learning material. Course Coordinators at Remote Centres, already trained for this purpose, ensure that workshop goes through smoothly.

Using this approach, we have trained 3,500, 4,200, 4,300, and 5,300 teachers, respectively, on Koha, Moodle, Scilab, and Python, in the past 9 months.

3. Syllabus for the workshop

Depending on the level of the user, one can learn any/all of the topics mentioned below. If one cannot complete all the topics, one can complete them later on, through self-learning, as all required Spoken Tutorials are freely available.

Linux: Ubuntu Desktop, Desktop Customization, Installing software in Ubuntu Linux, Basic Commands, General Purpose Utilities, File System, Working With Regular Files, File Attributes, Redirection Pipes, Basics of System Administration.

Bash: Introduction to Bash shell scripting, Basics of Shell Scripting, Command line arguments and Quoting, Globbing and Export command, Array operations in Bash, More on Arrays, Conditional execution, Nested and multilevel if/elif statements, Logical Operators.

Linux for Sys Ads: Creating a user account, Assigning Groups on User Creation, User Password management, Modifying User Account, Group Password and Login, Administrating Group with `gpasswd` Command, Modifying and Deleting Groups.

A Linux Virtual Box and relevant tutorials will be made available to all learners at the chosen Remote Centre. More Linux tutorials are available at <https://spoken-tutorial.org>.

The FOSSEE team helps you migrate your labs

The FOSSEE team has taken up the effort to promote Linux in colleges all over India. We help you to migrate your CS/IT course labs to Open source software labs on the Linux Operating System. If interested, please write to us at info@fossee.in.

4. Teaching faculty

- Prof. Kumar Appaiah, Department of Electrical Engineering, IIT Bombay
- System Administrators, FOSSEE and Spoken Tutorial, IIT Bombay

5. Course Fee

Every participant has to pay Rs. 100 as the course fee to IIT Bombay at the time of online registration. On the day of the workshop, i.e., on **23 August 2019**, they have to pay Rs. 400 to the Remote Centre that they would be attending, to defray the cost of organising the workshop, lunch, and coffee/tea. Please note that the registration fee once paid is neither refundable nor adjustable under any circumstances.

6. Who should attend?

As this workshop is not subject-specific, teaching faculty from all colleges (engineering, sciences, arts, commerce, management, law, medicine, etc.), polytechnic colleges, ITIs, and schools, can attend. Teachers registered in any Masters programme, and also all Research Scholars can also participate.

7. Criteria for issuing Certificates

E-certificate will be provided to the participants after successful completion of the workshop and filling up the feedback form.

8. Duration and Venue

The workshop will be conducted on **Friday, 23 August 2019** from **9.30 AM to 6.00 PM** at **Remote Centres** of IIT Bombay. This workshop will be conducted through a blended mode, using both live video conferencing facility (A-VIEW) and hands-on sessions using Spoken Tutorials. A detailed workshop schedule will be available soon.

9. How to apply?

Enrollment will be strictly online, and no other mode of application will be entertained. **The last date of registration**

is **22 August 2019, 12.30 pm**. The URL for registration is: <http://www.iitb.ac.in/nmeict/announcements.html>

Register on the Spoken Tutorial Website:

1. Before the workshop, participants should register on <https://spoken-tutorial.org/>.
2. Fill up the registration form and submit.
3. An email will be received.
4. The account should be activated by clicking the link in the email.
5. The Username and Password should be noted. This is an extremely important step.
6. One needs the above information to post questions on the forum, explained from 8 to 9 minutes 45 seconds of [this video](#).

Note

- Neither IIT Bombay nor the Remote Centre will bear the travel expenses of the participating representatives. There shall also be no accommodation provided to the participants.
- All participants are required to bring **earphones**, as they will have to listen to video tutorials. Without earphones, the workshop will not at all be effective.
- Computers to practise Spoken Tutorials and to learn Linux will be available at the Remote Centres. But if they wish, participants can bring their own laptops with Linux installed.

10. Address for communication

Dr. Kalpana Kannan
Project Coordinator, ESOS Project
Department of CSI, Kanwal Rekhi Building,
Indian Institute of Technology Bombay,
Mumbai - 400 076
Tel.: +91-22-2576 4989
Email: goutreach@iitb.ac.in

One day Workshop
on
Linux
Conducted by the
Teaching Learning Centre (ICT)

Funded by the
Pandit Madan Mohan Malaviya
National Mission on Teachers and Teaching,
MHRD, Govt. of India

Supported by FOSSEE & Spoken Tutorial

on
23 August 2019

Coordinated from
IIT Bombay



Linux Course Instructor

Prof. Kumar Appaiah
Department of Electrical Engineering,
Indian Institute of Technology Bombay

Project Coordinator

Prof. Kannan M. Moudgalya
Department of Chemical Engineering
Indian Institute of Technology Bombay
Powai, Mumbai 400076

14. Brochure by SKIT:-

1. About the Institution:-

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) inspired from the learnings of Swami Keshvanand, was established in the year 2000 by Technocrats and Managers Society for Advanced Learning. Today the institute is recognized as one of the center of academic excellence in Northern India. The Institute is affiliated to Rajasthan Technical University, Kota for offering Postgraduate and Graduate Courses in Engineering and Management. Our sister institution Swami Keshvanand Institute of Pharmacy (SKIP) is affiliated to Rajasthan University of Health Sciences for offering Graduate Course in Pharmacy. It is located in the Pink City Jaipur, which is a blend of traditional history and modern outlook. SKIT is putting in efforts for making industry ready engineers and managers through effective Industry – Institute Interface. Apart from University curriculum SKIT also pursues activities for research and development in various fields. The green landscaping, aesthetic elegance of arches and the vibrant pursuit of knowledge by the young aspirants make the environment serene, pleasant and dynamic.

2. Introduction:-

IIT Bombay has conducted many large-scale teacher training workshops under the Train 10,000 Teachers (T10KT) programme, sponsored by the National Mission on Education through ICT (NMEICT), MHRD, Govt. of India, and trained over 2,00,000 teachers.

Another successful technology developed at IIT Bombay is Spoken Tutorial, using which about 50 lakh students have been trained on various ICT topics. The effectiveness of this method can be seen from the testimonials available here: <http://spoken-tutorial.org/testimonials/media/?foss=70> and this TEDx talk. The Spoken Tutorial project is also implemented successfully at IIT Bombay, with funding from NMEICT, MHRD.

Linux is one of the most popular Operating Systems used in today. Linux refers to the family of Unix-like

computer operating systems that use the Linux kernel. It can be installed on a wide variety of computer hardware, ranging from mobile phones, tablet computers and video game consoles to mainframes and supercomputers.

Linux is open source software and the Linux kernel is released under the GNU General Public License and hence can be freely created, modified and redistributed.

Linux is actually just a kernel. Many people have put together distributions (often called flavors), that contain not just the kernel but also many other programming tools and utilities. Some well-known distributions include Red Hat Linux, Ubuntu, SuSE Linux, and Debian GNU/Linux.

The real power of Linux can be tapped by using its wide and powerful storehouse of commands that can be typed in the terminal. The reason behind this is the fact that Linux can trace its intellectual heritage, if not its source code, to the Unix OS. Unix was developed much before GUI environments were dreamt of. Thus, Unix (and hence Linux) provides a wide array of flexible text-mode commands.

Linux is now used in all major software projects undertaken by the Indian Government. Some of the examples are GST, Aadhar, and NEFT. Naturally, the employment potential of students who are good in Linux is very high.

The FOSSEE project at IIT Bombay (Free/Libre and Open Source Software for Education) (<https://fossee.in>) has been promoting Linux, and other FLOSS software, such as Scilab, OpenFOAM, eSim, Osdag, OpenModelica, DWSIM & R, and Open Source hardware, such as Arduino and OpenPLC. FOSSEE is also funded by NMEICT, MHRD.

3. Methodology of the Main Workshop:-

It will be a one day workshop, on 23 August 2019. All participants will have to go to their chosen Remote Centre. They will learn Linux through the active method of reproducing every command demonstrated in the award-winning Spoken

Tutorials. As learning happens through self-learning, the self-confidence of the learners is very high. Moreover, they can use the same method to train their students on the important topic of Linux, using Spoken Tutorials.

All the participants, from the Remote Centre, will be able to interact with the Linux team at IIT Bombay, ask them questions, etc. through the video conferencing software A-VIEW. There will be about 4 to 5 hours available for Linux training and 2 hours for interactions.

4. Syllabus for the workshop:-

Depending on the level of the user, one can learn any/all of the topics mentioned below. If one cannot complete all the topics, one can complete them later on, through self-learning, as all required Spoken Tutorials are freely available.

Linux: Ubuntu Desktop, Desktop Customization, Installing software in Ubuntu Linux, Basic Commands, General Purpose Utilities, File System, Working With Regular Files, File Attributes, Redirection Pipes, Basics of System Administration. Bash: Introduction to Bash shell scripting, Basics of Shell Scripting, Command line arguments and Quoting, Globbing and Export command, Array operations in Bash, More on Arrays, Conditional execution, Nested and multilevel if else statements, Logical Operators.

Linux for Sys Ads: Creating a user account, Assigning Groups on User Creation, User Password management, Modifying User Account, Group Password and Login, Administrating Group with gpasswd Command, Modifying and Deleting Groups.

A Linux Virtual Box and relevant tutorials will be made available to all learners at the chosen Remote Centre. More Linux tutorials are available at <https://spoken-tutorial.org>.

5. Teaching faculty:-

- > Prof. Kumar Appaiah, Department of Electrical Engineering, IIT Bombay
- > System Administrators, FOSSEE and Spoken Tutorial, IIT Bombay.

6. Course Fee:-

Every participant has to pay **Rs. 100** as the course fee to IIT Bombay at the time of online registration. On the day of the workshop, i.e., on 23 August 2019, they have to pay **Rs. 400** to the Remote Centre that they would be attending, to defray the cost of organizing the workshop, lunch, and coffee/tea. Please note that the registration fee once paid is neither refundable nor adjustable under any circumstances.

7. Who should attend?

As this workshop is not subject-specific, teaching faculty from all colleges (engineering, sciences, arts, commerce, management, law, medicine, etc.), polytechnic colleges, ITIs, and schools, can attend. Teachers registered in any Masters programme, and also all Research Scholars can also participate.

8. Criteria for Certification:-

E-certificate will be provided to the participants after successful completion of the workshop and filling up the feedback form.

9. Duration and Venue:-

The workshop will be conducted at, Swami Keshvanand Institute of Technology, Jaipur on **Friday, 23 August 2019 from 9.30 AM to 6.00 PM at Remote Centres of IIT Bombay**. This workshop will be conducted through a blended mode, using both live video conferencing facility (A-VIEW) and hands-on sessions using Spoken Tutorials.

10. How to apply?

Enrollment will be strictly online, and no other mode of application will be entertained. The last date of registration is 22 August 2019, 12.30 pm. The URL for registration is <http://www.it.iiitb.ac.in/nmeict/announcements.html>

Registration process for this workshop:-

1. **Sign up** using your valid email id. Remember your email id and password for future programs.
2. After verification of your sign up, your account will be created on the NMEICT website.

3. Login on the website with the verified account.
4. Go to Announcements, select the course, and register.
5. After successful registration, you will receive an automated email.

Register on Spoken Tutorial Website:-

1. Before the workshop, participants should register on <https://spoken-tutorial.org>
2. Fill up the registration form and submit.
3. You will get an email.
4. Activate the account by clicking the link in the email.
5. Note down your Username and Password.
6. You will use this to post questions on the forum.

Note:-

1. Neither IIT Bombay nor the Remote Centre will bear the travel expense of the participating representatives. There shall also be no accommodation provided to the participants.

2. All participants are required to bring **ear phones**, as they will have to listen to video tutorials. Without ear phones, the workshop will not at all be effective.

3. Computers to practise Spoken Tutorials and to do Linux will be available at the Remote Centres. But if they wish, participants can bring their own laptops with Linux installed.

Address for Communication:-

Dr. Mukesh Kumar Gupta
Remote Center Coordinator & Professor, Department of CSE
SKIT, Jaipur, Pin: 302017.
Mobile: 9772545766
Email: mukeshgupta@skit.ac.in

Mr. Kailash Soni
Programme Coordinator & Asst. Professor, Department of CSE,
SKIT, Jaipur, Pin: 302017.
Mobile: 9460066186
Email: kailash100ni.er@gmail.com



Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

One Day Workshop Under

'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)'

Funded by the

Ministry of Human Resource Development, Government of India
On

Linux

23 August 2019

Conducted by
IIT Bombay

Hosted by
SKIT, Jaipur
(RC -1476)



15. Invitation by IIT:-



Kannan M. Moudgalya, Ph.D
Erach and Meheroo Mehta
Advanced Education Technology
Chair Professor
Department of Chemical Engineering
Indian Institute of Technology Bombay
Powai, Mumbai 400075, India.



कन्नन मणि मोंडग्या
इराच मेहरो म्हा
एच एच मेहरो म्हा
चैर प्रोफेसर
केमिकल इंजिनियरिंग
इण्डियन इंस्टीट्यूट ऑफ
टेक्नॉलॉजी बॉम्बे
पोवा, मुंबई ४०००७५, महाराष्ट्र.



22 July 2019

Dear Remote Centre Coordinator,

Greetings from IIT Bombay!

I am writing this mail to request you to make available your Remote Centre for the benefit of teachers from nearby colleges and schools (and also your institution) who may want to undergo Linux Training through a **One day workshop**.

This workshop is organised by the Teaching Learning Centre (TLC) at IIT Bombay, funded by the *Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)*, an initiative of the Ministry of Human Resource Development, Government of India. I am writing this mail to invite you to host this workshop in your Remote Centre.

Details of this programme are given below:

Coordinators' Workshop (1 day): Saturday, **03 August 2019** at your/nearby Remote Centre

Main Workshop (1 day): Saturday, **24 August 2019**, at various participating Remote Centres

How the main workshop will be conducted?

It will be a one day workshop. There will be interactions through A-VIEW at the beginning. After that, all participants at your remote centre will learn Linux using high quality spoken tutorials especially created for self learning. In the evening, we will connect through A-VIEW, carry out discussions, and end the programme. There may be one more interaction at midday. There will be about 4 hours available for Linux training and 2 hours for interactions, a detailed schedule of which will be sent to you later.

The participants of the main workshop will pay Rs. 100 as a course fee to IIT Bombay, and Rs. 400 to the RC directly at the time of the workshop, from which, you will have to provide lunch and tea/snacks. The balance amount can be kept as a partial compensation for the use of your infrastructure.

IIT Bombay will pay Rs. 2,000 as an honorarium to the following two people, from each participating Remote Centre: (1) RCC (2) Teacher, who is the Course

Coordinator. In addition to the above, we will also pay Rs. 1,000 as an honorarium to your support/technical staff. In this way, each participating RC will receive a total of Rs. 5,000 from IIT Bombay.

Coordinators' workshop:

If you want to offer your RC for this course, you will have to nominate one of your representatives i.e. a **Faculty Member, who will later be considered as a Course Coordinator**. If your Course Coordinator has already conducted the Koha, Moodle, Scilab or Python workshops then he/she has to attend the Coordinators' workshop only through A-VIEW. If your institute has not conducted even one of the spoken tutorial workshops i.e., Koha, Moodle, Scilab or Python, then your nominated Course Coordinator will have to travel to a nearby Remote Centre on **03 August 2019**. The meal and accommodation (for 1 night) will be provided at the remote centre as this shall be taken care of by IIT Bombay. Stay arrangement in all the remote centres is not guaranteed and it is subject to availability. You will have to bear their travel expenses, as we will NOT pay. In addition, there will be a nominal **course registration fee of Rs. 200**. There will be a certificate of participation to all who undergo the Coordinators' Workshop.

Procedure to participate in the Coordinators' Workshop:

If your RC is willing to participate in this workshop, please login to the website (<https://www.it.iitb.ac.in/nmeict/>) using your RCC email id credentials and express your willingness by filling the seating capacity **before 12 noon on Wednesday, 24 July 2019**.

Please also ask your Course Coordinator to register (Sign up) on our IITB-NMEICT website from **24 July, 2 pm till 2 August 2019, 12.30 pm**. We will be sending the registration link to your nominated Course Coordinator. The registration website is here: <https://www.it.iitb.ac.in/nmeict>

More details of the Coordinators's Workshop are in the brochure that are sending you. We look forward to your enthusiastic participation in this initiative.

Regards,

Prof. Kannan Moudgalya
PI, TLC (ICT), PMMMNMTT

16. Invitation by SKIT:-



**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY,
MANAGEMENT & GRAMOTHAN
Ramnagar, Jaipur**



Date: 16.08.2019

INVITATION FOR LINUX WORKSHOP

We are glad to inform you that Swami Keshvanand Institute of Technology, Management & Gramathan, Jaipur and Indian Institute of Technology, Bombay are jointly organizing a One Day Workshop on Linux under the project 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNTT), funded by the Ministry of Human Resource Development, Government of India.

Linux is one of the most popular and open source Operating Systems used in today. Linux refers to the family of Unix-like computer operating systems that use the Linux kernel. Linux kernel is released under the GNU General Public License and hence can be freely created, modified and redistributed. The real power of Linux can be tapped by using its wide and powerful storehouse of commands that can be typed in the terminal. Linux is now used in all major software projects undertaken by the Indian Government. Some of the examples are GST, Aadhar, and NEFT. Naturally, the employment potential of students who are good in Linux is very high.

On behalf of the remote centre SKIT College, Jaipur, I request you to circulate and give publicity to the event and encourage your colleagues to participate. Interested candidates may register on or before 22th August, 2019 till 12:30pm through online link given below.

Title: 'One Day Workshop on Linux'

Date: 23th of August, 2019

Venue: SKIT College, Jaipur

For registration/fee details: <http://www.it.iitb.ac.in/nmeict/announcements.html>

For queries please contact: Kailash Soni (9460066186) / kailash100ni.er@gmail.com



Spoken Tutorials



RC Coordinator:

Dr. Mukesh Kumar Gupta
Professor, Department of CSE
Ph: 0141-5160400

Workshop Coordinator:

Mr. Kailash Soni
Asst. Professor, Department of CSE
Mob: 9460066186

17. Workshop Schedule:-

Schedule of Linux workshop:-

One day Workshop on 'Linux' on 23 August 2019		
Timing	Teacher	Session type
9.00 AM - 9.30 AM	Connect online on A-VIEW and testing session	Online through A-VIEW
9.30 AM - 09.45 AM	Inaugural talk by Prof. Kumar Appaiah and Prof. Kannan Moudgalya	
09.45 AM -10.00 AM		
10.00 AM - 10.15 AM	Introduction to Spoken Tutorial Forums	
10.15 AM – 10.30 AM	*Tea Break	
10.30 AM - 12.30 PM	Activity: Hands-on session using spoken tutorials	At remote centre
12.30 PM to 01.00 PM	Interaction with Remote centers	Online through A-VIEW
1.00 PM - 2.00 PM	*Lunch Break	
2.00 PM- 3.30 PM	Activity: Hands-on session using spoken tutorials	At remote centre
3.30 PM- 4.00 PM	*Tea Break	
4.00 PM- 5.00 PM	Activity: Hands-on session using spoken tutorials	At remote centre
5.00 PM - 6.00 PM	Question and Answer session and Valedictory session	Online through A-VIEW

18. Sessions of Workshop:-

The workshop was scheduled in following four sessions:-

18.1. Session 1:- Ubuntu Linux on VirtualBox

- (a) Installing VirtualBox in Windows OS
- (b) Installing VirtualBox on Ubuntu Linux OS
- (c) Installing Ubuntu Linux OS in a VirtualBox

18.2. Session 2:- Linux

- (a) Ubuntu Desktop 16.04
- (b) Desktop Customization 16.04
- (c) Installing software in Ubuntu Linux 16.04 OS
- (d) Basic Commands
- (e) General Purpose Utilities in Linux
- (f) File System
- (g) Working With Regular Files
- (h) File Attributes
- (i) Redirection Pipes
- (j) Basics of System Administration

18.3. Session 3:- Bash

- (a) Introduction to BASH shell scripting
- (b) Basics of Shell Scripting
- (c) Command line arguments and Quoting
- (d) Globbing and Export command
- (e) Array operations in BASH
- (f) More on Arrays

- (g) Conditional execution
- (h) Nested and multilevel if elsif statements
- (i) Logical Operators

18.4. Session 4:- Linux for Sys Ads

- (a) Creating user account
- (b) Assigning Groups on User Creation
- (c) User Password management
- (d) Modifying User Account
- (e) Group Password and Login
- (f) Administrating Group with gpasswd Command
- (g) Modifying and Deleting Groups

19. Attendance Sheet of Participants:-

Total number of registered participants: - 15, Present participants: - 15, Absent participants: - 00

Attendance Sheet for Date : 2019-08-23
One day Workshop on Linux on 23 August 2019
 August 23rd, 2019 to August 23rd, 2019
 Under the National Mission on Education through ICT, MHRD, New Delhi
 1476 - Swami Keshvanand Institute Of Technology, Management and Gramothan , Jaipur

Participant			Signature			
S No	Participant ID	Name	Session 1	Session 2	Session 3	Session 4
1	209877	Hemant Mathur				
2	210075	Pankaj Dadheech				
3	210140	Vijeta Khicha				
4	210238	Shanu Tripathi				
5	210928	Niketa Sharma				
6	210943	Neeraj Garg				
7	211065	Brajraj Sharma				
8	211092	Ganpat Singh Chauhan				
9	211497	Priyanka				
10	211550	Nikhar Bhatnagar				
11	211662	Priyanka Sharma				
12	211670	Anjali Pandey				
13	211802	Harpreet Singh Gill				
14	211814	Anshika Malsaria				
* 15	211665	Rubal Deep Gill				

* Candidate no (15) Rubal Deep Gill registered at (IIS) ^(RC1417), by mistake but she present at our center SKIT (RC1476) and she completed the offline certificate. So kindly consider it as present.

Total Registered = 14 + 1
 Total Present = 15
 Absent = Nil

Karlosh Soni
 23/8/19
 Karlosh Soni
 Workshop Coordinator
 OldIKs794e

2019-08-23

20. Various Images for Publicity:-



Swami Keshvanand Institute of Technology
Management & Gramothan, Jaipur



Welcomes you for
One Day Workshop on
LINUX

DATE : August 23, 2019
VENUE : SKIT College, Jaipur

The background of the poster features a network of blue lines connecting yellow nodes, set against a dark blue background.



Swami Keshvanand
Institute of Technology
Management & Gramothan, Jaipur



WELCOMES YOU FOR
ONE DAY WORKSHOP ON
LINUX

DATE : August 23, 2019
VENUE : SKIT College, Jaipur



The background of the poster features a pattern of overlapping hexagons in shades of teal and grey.

21. Glimpses of Workshop:-



22. Words of Acknowledgement:-

I would like to thanks **Prof. Kannan Moudgalya**, Project Coordinator & Principal Investigator, **Prof. Kumar Appaiah**, Linux Course Instructor, Department of Electrical Engineering and IIT Bombay to conduct such a knowledgeable and useful workshop.

I would also like to thanks **Dr. S.L. Surana**, Director (Academics) and **Prof. (Dr.) Ramesh Kumar Pachar**, Principal (SKIT) to allow me to conduct this workshop in the college campus.

I would also like to thanks **Prof. (Dr.) Anil Chaudhary**, HOD IT and **Prof. (Dr.) C.M. Choudhary** HOD CSE to allow me to coordinate this workshop in the department and provide me the workshop venue (CL-18 lab) to conduct this workshop.

I would also like to thanks our remote centre coordinator **Dr. Mukesh Kumar Gupta** to provide such a great opportunity and golden guidance to organize this workshop.

I would also like to thanks all the technical members and staff to provide their valuable time to successful organizes this workshop.

I would also like to thanks all the Participants to their registration and participation in this workshop.

===== Thanks =====



Spoken Tutorials



===== Thanks =====