

SPOKEN TUTORIAL

The Spoken Tutorial Project is about teaching and learning a particular FOSS (Free and Open Source Software) like Linux, Scilab, LaTeX, PHP & MySQL, Java, C/C++, LibreOffice etc. via an easy Video tool - Spoken Tutorials. Some of the salient features of SELF (Spoken Tutorial based Education and Learning through Free FOSS study) are as follows.

1. This distance education method is highly conducive to self-learning.
2. Once one gets started any student or faculty can master the FOSS and also get certificates, Silver/Learner's and Gold/Completion (based on clearing an assessment test)
3. UG, PG or Research scholar students and even teachers of Science, IT, Engineering, Commerce, Management, MCA disciplines can learn any of the FOSS.
4. Typically, the first Training at any college is of 2 hours duration. Timing is per the group's convenience.
5. To start of, any college which is organising the Training needs to get a computer lab ready with machines that support sound. There is no lower or upper limit on the number of participants. This just depends on the number of computers available. For additional participants, laptops if available can be used.
6. Support from IIT Bombay is available over Skype, in such cases the main organiser's computer should have a webcam via which the Spoken Tutorial team can monitor the Training and answer questions.
7. If the participants wish to take the test they must do so a month after the Training.

As a first step, the organiser typically a faculty member must register on the Spoken Tutorial site and become authorised to request and conduct training in his/her college. The organiser can also identify student volunteers to publicise and help with the Training. Students have a lot of energy and are very enthusiastic about such activities. Student volunteers get a special certificate, and a T-shirt! They also develop Event management and Project coordination skills. .

All of the above mean a big deal to students for their career with recruiters and at PG interviews.

Today, SMEs and Govt. departments are moving to Open Source Software like Linux OS. Students with this knowledge will have an edge in the job market. They can also become entrepreneurs and use Open Source Software in their businesses, and save money vs., if they were using commercial software. Net - it is a win-win situation for all and the best part....all the Trainings are conducted **FREE** of cost. We are having a very good experience with colleges across the length and breadth of India with this format. They start with one and move to cover more batches, more departments, different FOSS series....All working together to Bridge the Digital Divide in our nation.

Software Offered

Currently Spoken Tutorial project offers software training on the below mentioned list of software, applications and programming languages.

Spoken Tutorial Software Series

No.	Software	Application
1	Basic IT Skills package	<p>Learn how to use</p> <ul style="list-style-type: none">• The Linux operating system• LibreOffice Suite - for basic Office applications and• Firefox web browser - to browse the internet safely <p>This package is useful to all who wish to learn basic IT skills. Absolute must for beginners.</p>
2	Ascend	<p>ASCEND is a free, open source, mathematical modelling system.</p> <p>Its main uses have been in the field of chemical process modelling, with its novel modelling language conventions and powerful solver.</p> <p>Useful for Chemical Engg and Chemistry students.</p>
3	Avogadro	<p>Avogadro is a free and open source, advanced molecule editor and visualizer designed for cross-platform use in computational chemistry, bioinformatics, etc. It offers flexible high quality rendering.</p> <p>Useful for Chemistry and Bioinformatics students.</p>
4	BASH	<p>Bash is a "Unix shell" command-line interface for interacting with the operating system. Bash has the ability to run an entire script of commands, known as a "Bash Shell script" or "Shell script".</p> <p>Familiarity with GNU/Linux command lines, and familiarity with basic programming concepts is a pre-requisite for learning BASH. System administrators will greatly benefit by learning to automate common tasks using BASH.</p>
5	Biopython	<p>Biopython is a collection of Python tools for computational biology and bioinformatics. Biopython contains modules and classes to represent protein sequences, nucleic acid sequences and sequence annotations.</p>
6	Blender	<p>Open source equivalent to Maya and 3DMax. Useful to create 3D Animation for Architecture & Animation students. Can be used by Civil Engineering students, also.</p>
7	C and C++	<p>Powerful features, simple syntax, and portability make C a preferred language among programmers, for business and</p>

		industrial applications. Widely used in the development of operating systems.
8	Advanced C	For Advanced C series, learner should necessarily go through C and C++ series beforehand.
9	Advanced C++	For Advanced C++ series, learner should necessarily go through C and C++ series beforehand.
10	CellDesigner	CellDesigner is a process diagram editor for drawing gene-regulatory and biochemical networks. CellDesigner is used for user-friendly visualization Modeling and Simulation of genetic regulatory networks, Protein networks and metabolic networks. Useful for Bio-Chemistry students.
11	Drupal	Drupal is a free and open source content management system (CMS) written in PHP and distributed under the GNU General Public License. Useful for website-building and web applications.
12	DWSIM	DWSIM is an open-source CAPE-OPEN compliant chemical process simulator. It allows us to conduct experiments and analyze data using advanced models and operations. Useful for Chemical Engineering students to run the simulations and get a better understanding on a phenomenon.
13	Expeyes	ExpEYES stands for Experiments for Young Engineers and Scientists. It is used to perform basic Physics and Electronics experiments. ExpEYES junior can be used from secondary to graduate level and also in some engineering branches.
14	Firefox	Free, open source and popular web browser. Allows you to view Internet web pages, navigate through web pages, and search for web pages using search engines such as Google, Yahoo Search or Bing.
15	GChemPaint	GChemPaint allows you to draw and display 2D chemical structures. This application is useful for school students (9th standard and above) as well as school teachers. Very useful to teach and learn abstract chemistry concepts. Works only on Linux
16	GeoGebra	Interactive Geometry, Algebra and Calculus application for school students (7th standard and above) as well as school teachers. Very useful to teach and learn abstract geometry concepts.
17	gedit Text Editor	gedit Text Editor is a powerful general purpose text editor. It is free and open source software. It is simple and ease of use with simple GUI.

		Useful for everyone
18	GIMP	Graphics art and design software application for the editing and creation of original images, icons, graphical elements of web pages and art for user interface elements. Useful for all graphic related work. Open source equivalent of Photoshop .
19	GIT	Git is a distributed version control software. It is a free and open source software. It keeps track of changes made to a file or set of files. It helps in tracking the project progress history.
20	Inkscape	Graphics art and design software application for the editing and creation of original images, icons, graphical elements of web pages and art for user interface elements. Useful for all graphic related work. Open source equivalent of CorelDraw and Illustrator .
21	Java and Netbeans	<p>Learn to use Java</p> <ul style="list-style-type: none"> Free and open source, high level, simple as well as object-oriented programming language. Included in the curriculum of schools and colleges offering Computer Science and IT subjects. <p>Learn to use Netbeans IDE</p> <ul style="list-style-type: none"> NetBeans IDE is an open-source integrated development environment. NetBeans IDE supports development of all Java application types (Java SE including JavaFX, (Java ME, web, EJB and mobile applications) With Netbeans IDE, one can quickly and easily develop desktop, mobile and web applications with Java, HTML5, PHP, C/C++ and more <p>We recommend that Java series be followed with Netbeans series.</p>
22	Java Business Application	<p>Learn how to create a business application from scratch.</p> <p>For Java Business Application series, learner should necessarily go through Java and Netbeans series beforehand.</p>
23	Jmol Application	<p>Learn how to create 3D chemical, crystal and biomolecules structures.</p> <p>This application is useful for school students (9th standard upto Post Graduation level) as well as school teachers. Very useful to teach and learn abstract chemistry concepts.</p>
24	KTurtle	An educational programming environment which helps in

		<p>learning how to build logic and how to program, in an easy manner. Some of its features are: intuitive syntax highlighting, simple error messages, integrated canvas to make drawings on, integrated help function, slow-motion or step execution, and more.</p> <p>Recommended for all who would like to learn programming logic.</p>
25	LaTeX & XFig	<p>LaTeX is a typesetting software for preparing reports, letters and presentations - specially useful for persons engaged in writing/ publishing documents from science/ arts/ commerce fields.</p> <p>Xfig is a free and open source vector graphics editor. In Xfig, figures may be drawn using objects such as circles, boxes, lines, spline curves, text, etc. ... and used in LaTeX and other documents.</p>
26	LibreOffice Suite	<p>Trains in basic computer usage skills like Word processing, Spreadsheet, Presentation using the LibreOffice components Writer, Calc and Impress. One can also learn other useful components like Draw, Math and Base in this series.</p>
27	Linux & Ubuntu BOSS Linux	<p>Free operating system, almost neutral to virus attacks and no hassles for licensing issues.</p>
28	OpenFOAM	<p>Open source/ free CFD (Computational Fluid Dynamics) software available for solving and analyzing problems and to create a real world fluid flow movie. Open source equivalent to FLUENT. Widely used in Academics and is gaining popularity in Industry as well- Companies including AUDI, Tata Steel, Volkswagen, and Govt. agencies like BARC (Babha Atomic Research Center).</p> <p>Works only on Linux</p>
29	OpenModelica	<p>OpenModelica is an open source modelling and simulation environment intended for industrial and academic usage. It is an object oriented declarative multi domain modelling language for complex systems.</p> <p>Useful for Chemical Engg students to learn how to do energy balance</p>
30	Oscad- now eSIM	<p>Open Source EDA tool for circuit design, simulation, analysis and PCB design. It is an integrated tool built using open source software such as KiCad, Ngspice and Scilab.</p>
31	Perl	<p>Practical Extraction and Reporting Language commonly known as PERL is a high level, general purpose and dynamic programming language. PERL has been used in graphics, web and network programming etc and you can find it's footprints in finance and bioinformatics domain, too.</p>

32	PHP & MySQL	Package for developing interactive websites and establishing back-end connectivity with a database - Famous websites using PHP include Facebook, Google, and Wikipedia.
33	Python	Numerical computational software for Science and Engineering Education - used in 3D animation and Gaming industry, Artificial Intelligence, YouTube, NASA, CERN, Yahoo and so on.
34	QCAD	QCAD is a free, open source application for computer aided drafting (CAD) in two dimensions (2D). Learn to create technical drawings such as plans for buildings, interiors, mechanical parts or schematics and diagrams using QCAD .
35	Scilab	Mathematical and scientific calculation software, open source substitute for MATLAB, very useful for all science and engineering students, in academics particularly.
36	Single Board Heater System	A single-board heater system is a low cost, open source, lab-in-a-box setup. It consists of a heater assembly, fan, temperature sensor, ATmega16 micro-controller and associated circuitry. The application of this device is in the Control Systems area of Engineering. All Undergraduate level experiments and most Post graduate level control experiments can be performed on the SBHS device.
37	Ruby	Dynamic, open source, general-purpose, interpreted, true object-oriented programming language. It is a server-side scripting language similar to Python and PERL. Large programs written in Ruby are easily maintainable. It can be easily connected to DB2, MySQL, Oracle, and Sybase.
38	UCSF Chimera	UCSF Chimera is a program for interactive visualization and analysis of molecular structures and related data. Using Chimera, one can generate high-quality images and animations. Useful for Chemistry students.
	Typing Software	
39	KTouch	Typing tutor - teaches how to type using an online interactive keyboard. Learn typing at your own pace. Gradually increase your typing speed and along with it, your accuracy.
40	TuxTyping	Typing application especially for children Start typing, Practice lessons, Play a typing game, Set a language for typing
	Utility software/application	
41	K3B	Learn to burn audio/video/data CDs/DVDs using K3B

42	Thunderbird	Learn to configure and use Thunderbird , a free email application that's easy to set-up and customize.
	Screen-reading software for the Visually Impaired	
43	Orca	Orca helps a visually-impaired person to navigate and use a PC/laptop for his/her day-to-day activities on their own without aided help.

Be a Part of the Spoken Tutorial Project

The Spoken Tutorial Project-IIT Bombay, welcomes one and all to be part of an IT revolution and contribute to spread awareness amongst students, teachers and other individuals of society. You can contribute as a -

1. SELF Training Organiser
2. SELF Training RESOURCE Center
3. SELF Training Partner

1. SELF Training Organiser:-

Any Staff/Officer/Faculty member can be an organiser. They make the first contact with the Spoken Tutorial team, IIT Bombay. Later it is important that a Faculty member/Staff/Officer/Teacher become in charge of organising the training. As mentioned Organisers need not know the Software to be taught in the Training / Workshop. The Organiser will arrange the computer lab and coordinate with students, say 20-30, could be more, and fix a date and timing for the first training. He/She will take care of all the prerequisites as per the checklist, for successful conduction of the Training. He/She will be in touch with the Spoken Tutorial team, IIT Bombay, on a regular basis to ensure that the training is successfully completed. It is mandated for almost all students in the college to get a chance to take the training. For this, the Organiser should identify Faculty from other departments to register and start requesting training sessions. Towards this he/she can involve the Principal or Director if necessary. The Organiser should also make a calendar or a time-table to arrange more batches in his own department.

2. SELF Training RESOURCE Center

Any College / University which wishes to contribute towards IT literacy and awareness can become a RESOURCE (Robust Extensions for Spoken Tutorial project on Open Source Software Usage for Recruitment, Community and Education) Center. A RESOURCE Center can conduct remote SELF workshops in its college, for other colleges and can also train other colleges and schools in conducting Spoken Tutorial SELF training. It can identify SELF training Organisers in Polytechnic, ITI and degree colleges, in and around its district. A RESOURCE Center can create a team of students and faculty members who will work on In this way, the project can be spread and awareness created in the entire state. Additionally it is expected that the RESOURCE Center will train all its students as well incorporate the Software courses in the curriculum where relevant.

A RESOURCE Center will be awarded an Appreciation Letter from Spoken Tutorial project, IIT Bombay. RESOURCE Centers can mention that they are authorised RESOURCE Centers of Spoken Tutorial project, IIT Bombay on their website and in their advertisements.

3. SELF Training Partner

These are universities and government bodies at state level such as DTE, CET, DET, DHE, VIT, DCE an so on. At their level and because they have a large circle of influence, such bodied can spread Spoken Tutorial based software training in a big way by Awareness - Circulars, Enabling - arranging training and appointing officers at regional/ zonal level, Monitoring - continuously motivating and urging the colleges to come forward and do the SELF Training on their campuses.