



1 Online / Offline content

1. The online content of Spoken Tutorials can be accessed from :
<https://spoken-tutorial.org/tutorial-search/>
2. You can also download the Spoken Tutorials for offline learning from :
<https://spoken-tutorial.org/cdcontent/>
3. From this link download the FOSS categories in the language you wish to learn.
4. The Spoken Tutorial content will be downloaded as a zip file on your machine.
5. Extract the contents of the zip file & access them.

2 The procedure to practise

1. You have been given a set of spoken tutorials and files.
2. You will typically do one tutorial at a time.
3. You may listen to a spoken tutorial and reproduce all the steps shown in the video *Side-by-Side learning*.
4. If you find it difficult to do the above, you may consider listening to the *whole* tutorial once and then practise during the second hearing.

3 eSim

1. Click on "Select FOSS Category" drop-down and choose "eSim".
2. Click on "Select Language" drop-down and choose the language (English).
3. Click on "Search" button.
4. You will see a list of tutorials based on your selection.
5. Start with the first/second tutorial based on the OS you are using from the displayed list.

4 General Instructions for eSim:

1. Always select components from the libraries starting with eSim for precise simulation results.
2. Whenever the *Missing libraries* pop-up window appears, click on *Close*.

3. Whenever the *Project Rescue Helper* dialog box appears, click on OK.
4. At the end of each tutorial, close the schematic by pressing Ctrl and Q keys together on the eSim schematic editor window.
5. At the end of each tutorial, remove the project selected from the *Projects* window, by clicking right on the Project and select the *Remove Project* option.
6. To see all the files listed under a particular project, right click on that project's name from the *Projects* window and select *refresh* option.

5 First Tutorial: Linux installation

1. If you are using Linux, locate the topic "Getting started with eSim Linux installation", and click on it.
2. If eSim is already installed, start from 3:55 minutes onwards to learn to use eSim.
3. *Examples* folder of eSim is present under *Downloads/eSim-1.1.2/*

6 Second Tutorial: Windows Installation

1. If you use Windows, locate the topic "Getting started with eSim Windows installation", and click on it.
2. Learn how to launch eSim and try to run a sample example shown in the tutorial *Getting started with eSim Windows Installation* from 2:55 minutes onward.
3. *Examples* folder of eSim is present under *C:/FOSSEE/eSim/*
4. The *Open* button will appear in Windows OS as *Select Folder* button.

7 Common instructions

1. To view the tutorial, click on the *Play* icon which is located in the player.
2. The *Pre-requisite* will be visible below the player (only for Online contents).
3. *Outline*, *Assignments* and *Code Files* are available below the player.
4. Adjust the size of the browser in such a way that you are able to practise in parallel.

5. Instructions to use Code files in *any* tutorial:
 - (a) Click on the link "Code files" located below the player and save it in your folder.
 - (b) Extract the downloaded zip file.
 - (c) You will see all the code/source files used in the particular tutorial.
 - (d) Use these files as per the instructions given in the particular tutorial.
6. Play-pause-practise the whole tutorial.
7. Attempt the **Assignments** as instructed.
8. Once the tutorial is complete, choose the next tutorial from the playlist which is located on the right side or below the player.
9. Follow all the above instructions, till you complete all the tutorials in the series.

8 **Third tutorial: Schematic Creation and Simulation**

1. Select components only from the libraries starting with eSim.
2. When assigning a new value to any component or changing the existing value, follow the exact method demonstrated at time 7:11. Do NOT change the field reference.
3. If you have changed values of components in the schematic, follow the procedure mentioned from time 9:17 to 11:32 to reflect those changes in the simulation compatible netlist.
4. Analysis parameters and source details should be the same as explained in time 9:52 to 11:20.
5. If you are using Windows OS, at time 14:32 in the tutorial, please go to C:/FOSSEE/eSim/src/deviceModelLibrary/Diode/ and select D.lib from there.

9 **Fourth Tutorial: Simulating an Astable Multivibrator**

1. When assigning a new value to any component or changing the existing value, follow the exact method demonstrated at time 6:52. Do NOT change the field reference.
2. If you have changed values of components in the schematic, follow the procedure mentioned from time 8:16 to 10:00 to reflect those changes in the simulation compatible netlist.
3. Make sure the analysis parameters, source details and device modelling tab values are same as mentioned from time 8:37 to 9:47.

If you are using Windows OS:

1. At time 9:14 in the tutorial, please go to C:/FOSSEE/eSim/src/deviceModelLibrary/Diode/ and select LED.lib from there.
2. At time 9:36 in the tutorial, please go to C:/FOSSEE/eSim/src/deviceModelLibrary/Transistor/ and select BC547B.lib from there.

10 **Fifth Tutorial: Mapping components with Footprints**

1. Examples folder of eSim is present under C:/FOSSEE/eSim/

11 **Sixth Tutorial: Setting Parameters for Designing PCB**

1. Download code files provided for this tutorial and extract the downloaded folder.
2. Place the extracted folder 7805VoltageRegulator on your Desktop.

12 **Seventh Tutorial: Laying Tracks on PCB**

1. Try this tutorial *only after* you have performed **Setting Parameters for Designing PCB** tutorial.
2. Use the same project that was used for the **Setting Parameters for Designing PCB** tutorial, i.e. 7805VoltageRegulator, which is saved on Desktop.

13 **Eighth Tutorial: PCB Layout for Astable Multivibrator**

1. Download code files provided for this tutorial and extract the downloaded folder.
2. Please select total of 6 layers for which the Gerber files are to be generated, as mentioned at time 8:21 onward. These layers are: B.Cu, F.Silks, Edge.Cuts, F.Mask, B.Mask and F.Cu.

14 **Ninth Tutorial: Device Model Creation and Simulation**

1. If you are using Windows OS, download and install the application Notepad++ to view and edit files with .lib extension.
2. If you are using Windows OS, at time 2:44 in the tutorial, please go to C:/FOSSEE/eSim/src/deviceModelLibrary/Diode/ and select diode_test.lib from there.