

# Schematic Creation and Simulation using eSim

**Spoken Tutorial Project**

**<http://spoken-tutorial.org>**

**National Mission on Education through ICT**

**<http://sakshat.ac.in>**

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**20 June 2019**



# Learning Objectives

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- Create circuit schematic



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- ▶ **Convert spice netlist to ngspice format**



# Learning Objectives

In this tutorial, using eSim we will learn to-

- ▶ Create circuit schematic
- ▶ Generate spice netlist
- ▶ Convert spice netlist to ngspice format
- ▶ Simulate the netlist.



# System Requirements

- ▶ **Ubuntu Linux 16.04**
- ▶ **eSim version 1.1.2.**



# Prerequisites

To practice this tutorial, basic knowledge of

- ▶ **Analog and Digital electronics is required.**





# Launch eSim through terminal

- ▶ You can also open eSim from the terminal.
- ▶ Press Ctrl, Alt and T keys together.
- ▶ Type esim and press Enter.



# Device Models and Subcircuits

- ▶ **Simulating circuits involving semiconductor devices and subcircuits.**



# Download Code File

- ▶ **This file is available in the Code Files link, please download and save this file to your Desktop.**



# Summary

In this tutorial, we learnt how to,

- ▶ Create circuit schematic.
- ▶ Generate spice netlist.
- ▶ Convert spice netlist to ngspice format.
- ▶ Simulate the netlist



# Forum to answer questions

- ▶ Do you have questions in this Spoken Tutorial?
- ▶ Choose the minute and second where you have the question.
- ▶ Explain your question briefly.
- ▶ Someone from the FOSSEE team will answer them. Please visit

<http://forums.spoken-tutorial.org/>





# Textbook Companion Project

- ▶ The FOSSEE team coordinates coding of solved examples of popular books.
- ▶ We give honorarium and certificate to those who do this.

For more details, please visit this site:

<http://esim.fossee.in/textbook-companion-project>



# Acknowledgements

- ▶ Spoken Tutorial Project is a part of the Talk to a Teacher project
- ▶ It is supported by the National Mission on Education through ICT, MHRD, Government of India
- ▶ More information on this Mission is available at

<http://spoken-tutorial.org/NMEICT-Intro>





# THANK YOU!

For more Information, visit our website  
<http://fossee.in/>

