Advanced NgVeri

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT

Josiga S
FOSSEE Team, IIT Bombay

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▶ **Add dependency files and folders**

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- ▶ **Remove NgVeri models and**

Learning Objectives

In this tutorial, we will learn how to,

- ▶ **Add dependency files and folders**
- ▶ **Remove NgVeri models and**
- ▶ **Add and remove lint_off commands**

System Requirements

To record this tutorial, I am using

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- **Ubuntu OS v20.04**

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- ▶ **Ubuntu OS v20.04**
- ▶ **eSim v2.2**

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The process demonstrated in this tutorial is similar in Windows OS also

Pre-requisites

To follow this tutorial, the learner must have

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► **Basic knowledge of eSim**

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- ▶ **Basic knowledge of eSim**
- ▶ **Familiarity with Verilog and Mixed Signal Simulation**

Pre-requisites

To follow this tutorial, the learner must have

- ▶ **Basic knowledge of eSim**
- ▶ **Familiarity with Verilog and Mixed Signal Simulation**
- ▶ **Basic knowledge of NgVeri feature**

Pre-requisites

▶ **For pre-requisite eSim tutorials, please visit https://spoken-tutorial.org**

Code Files

► **The files used in this tutorial are provided in the Code files link**

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▶ **Make a copy and then use them while practicing**

► **For demonstration, we have taken the 8bit_vedic_multiplier project**

Example: Add Dependency Files

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▶ **Note that the 8bit_vedic_multiplier is taken from opencores.org**

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▶ **Note that the 8bit_vedic_multiplier is taken from opencores.org**

▶ **The same project folder is provided in the Code files link**

About lint

► **Linting helps us to check programmatic or stylistic errors in a program**

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▶ **Lint_off errors or warnings create a problem in compilation of NgVeri**

About lint

- **To ignore these lint_off errors, lint_off commands need to be added or removed**

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- **To ignore these lint_off errors, lint_off commands need to be added or removed**

- **To know more about lint_off commands, please refer this website: https://verilator.org/guide/latest/warnings.html#list-of-warnings**

► **While creating a model, sometimes we might get an error which can't be resolved**

Removing NgVeri Model

- **While creating a model, sometimes we might get an error which can't be resolved**
- **The error creates problems in building NgVeri for future verilog files also**

Removing NgVeri Model

▶ **In such a case, the error giving model must be removed by the Edit modlst option**

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► **The error model can be identified in the terminal**

Removing NgVeri Model

▶ **The Edit modlst option is useful to users to remove redundant models**

Removing NgVeri Model

▶ **The Edit modlst option is useful to users to remove redundant models**

▶ **It also reduces memory space**

Summary

In this tutorial, we have,

▶ Added dependency files and folders

▶ Removed NgVeri models and

▶ Added and removed lint_off commands in NgVeri

Assignment

▶ **Click on the Edit lint_off**

▶ **Check all the commands in the drop down**

▶ **Remove the CASEX lint_off command**

Assignment

▶ **Click on the Run Verilog to Ngspice Converter to generate model again**

▶ **Check if there are errors**

Assignment

► **Add the CASEX command again using the Add lint_off option**

► **Check whether it has been added by clicking on edit lint_off**

About the Spoken Tutorial Project

- ▶ **Watch the video available at https://spoken-tutorial.org /What_is_a_Spoken_Tutorial**

- ▶ **It summarises the Spoken Tutorial project**

- ▶ **If you do not have good bandwidth, you can download and watch it**

Spoken Tutorial Workshops

The Spoken Tutorial Project Team

▶ **Conducts workshops using spoken tutorials**

▶ **Gives certificates to those who pass an online test**

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

Answers for THIS Spoken Tutorial

- ► **Questions in THIS Spoken Tutorial**
- ► **Visit https://forums.spoken-tutorial.org**
- ► **Choose the minute and second where you have the question**
- ► **Explain your question briefly**
- ► **The Spoken Tutorial project will ensure an answer**
- ► **You will have to register to ask questions**

FOSSEE Forum

▶ **For any general or technical questions on eSim, visit the FOSSEE forum and post your question**
https://forums.fossee.in/

Circuit Simulation Project

▶ **The FOSSEE team coordinates the Circuit Simulation project**

▶ **For more details visit: https://esim.fossee.in/circuit-simulation-project**

TextBook Companion Project

- ▶ **The FOSSEE team coordinates the TextBook Companion project**
- ▶ **For more details visit:**
  https://esim.fossee.in/textbook-companion-project

Lab Migration

► **The FOSSEE team coordinates the Lab migration project**

► **For more details visit: https://esim.fossee.in/lab-migration-project**

Acknowledgement

▶ **The Spoken Tutorial project is funded by Ministry of Education, Govt. of India**

Thank you

- **This is Josiga, a FOSSEE Summer fellow 2022, IIT Bombay signing off**
- **Thanks for joining**