ModelSim Tutorial for EECS361

Introduction

This tutorial will guide you how to setup and run ModelSim in one of the Wilkinson machine.

Start ModelSim

1. Login to one of the Linux machines in Wilkinson Lab.
2. Copy the file “eecs361.txt” from Canvas (Files->Lab) to your directory in Wilkinson machine (e.g., /home/YOUR-NETID/).
3. Open the terminal.
4. type the following command:

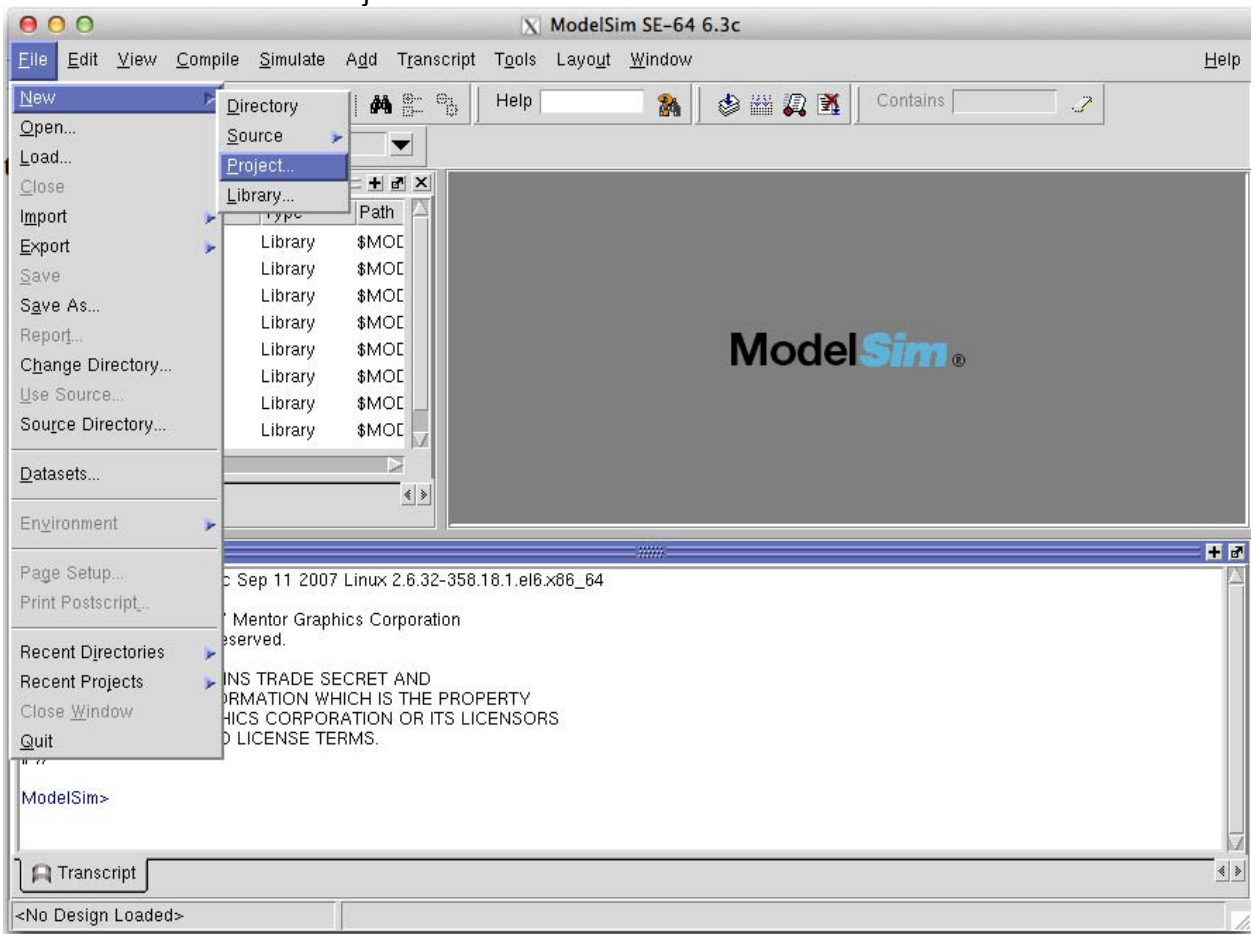
```
source /home/YOUR-NETID/eecs361.txt
```

4. Start ModelSim by typing:

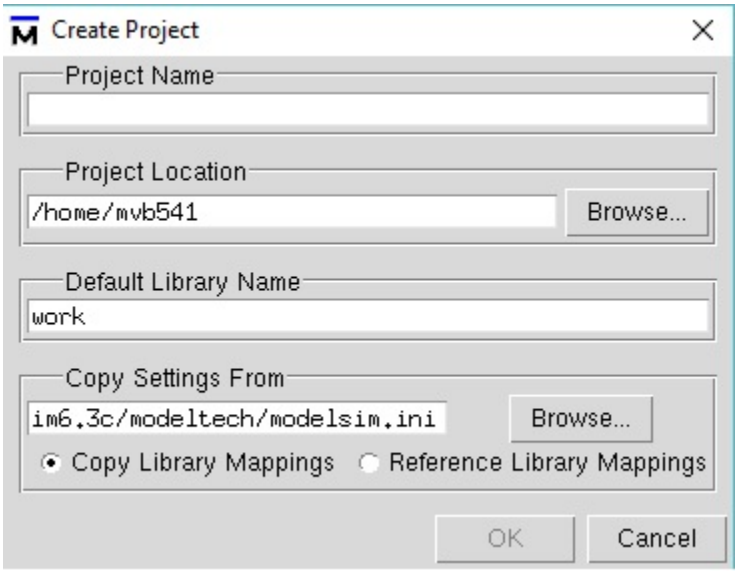
```
vsim
```

Create a new project

1. Select File -> New -> Project…



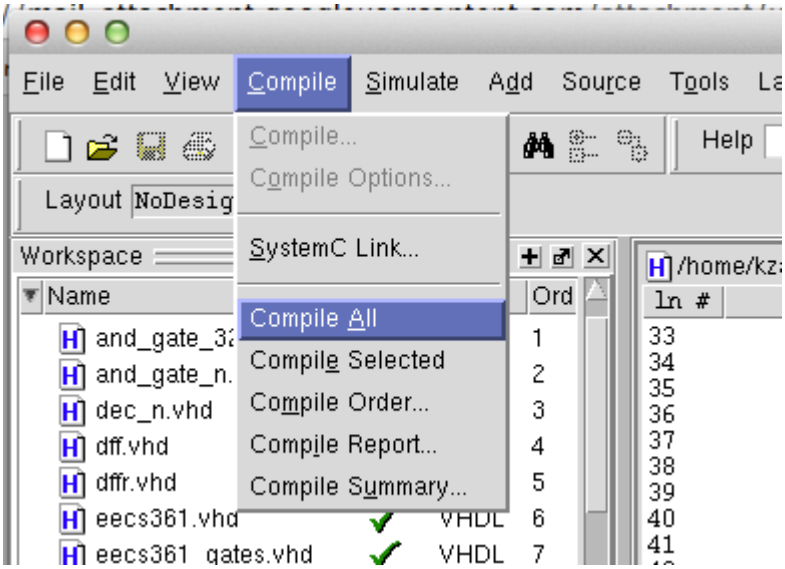
2. Fill in the “Project Name” and “Project Location”. The “Project Location” is where you want to put your project in. Leave the other fields unchanged. Click OK. If a new dialogue pops out asking you to create the directory, click OK.



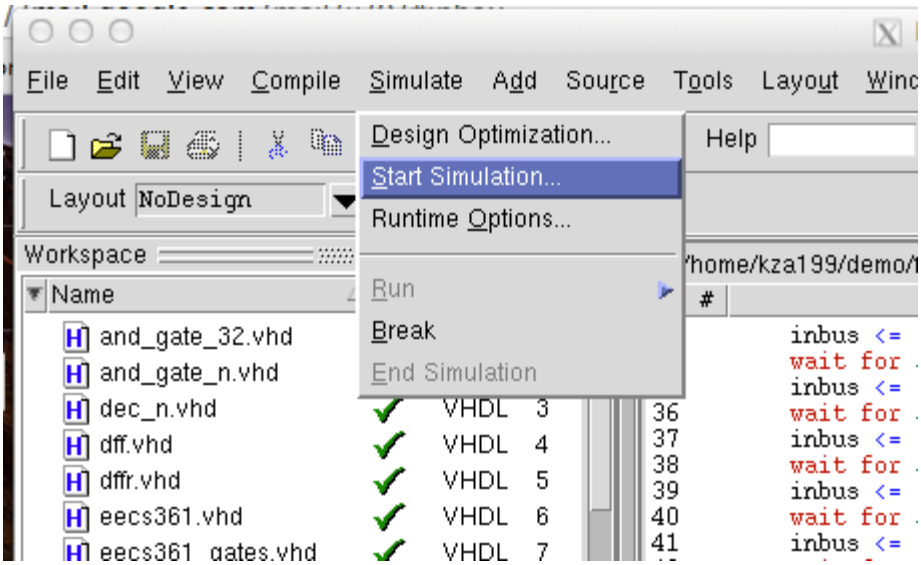
3. ModelSim will ask you to add items to the project right after your project is created. You can do it now or do it later. In this tutorial, we simply close this dialogue.

Compile and simulate

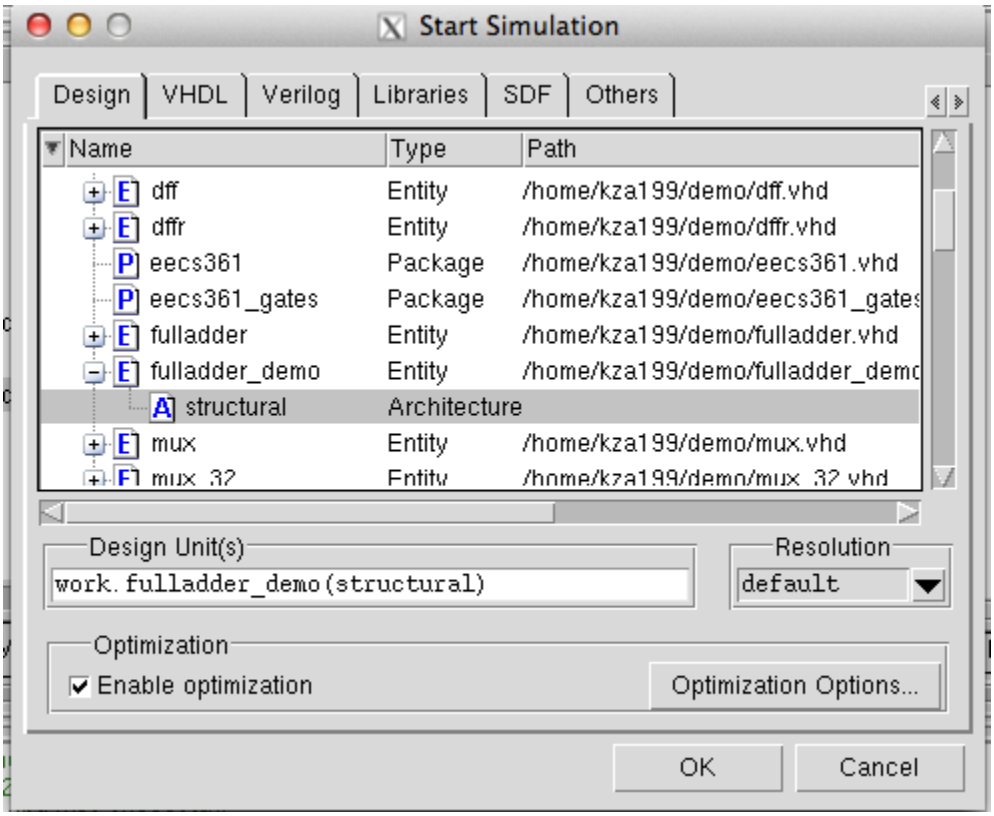
1. Compile all the files by selecting Compile -> “Compile All” or “Compile -> “Compile Selected”.



2. After successfully compiled the project, start the simulation by selecting “Simulate” -> “Start Simulation”.

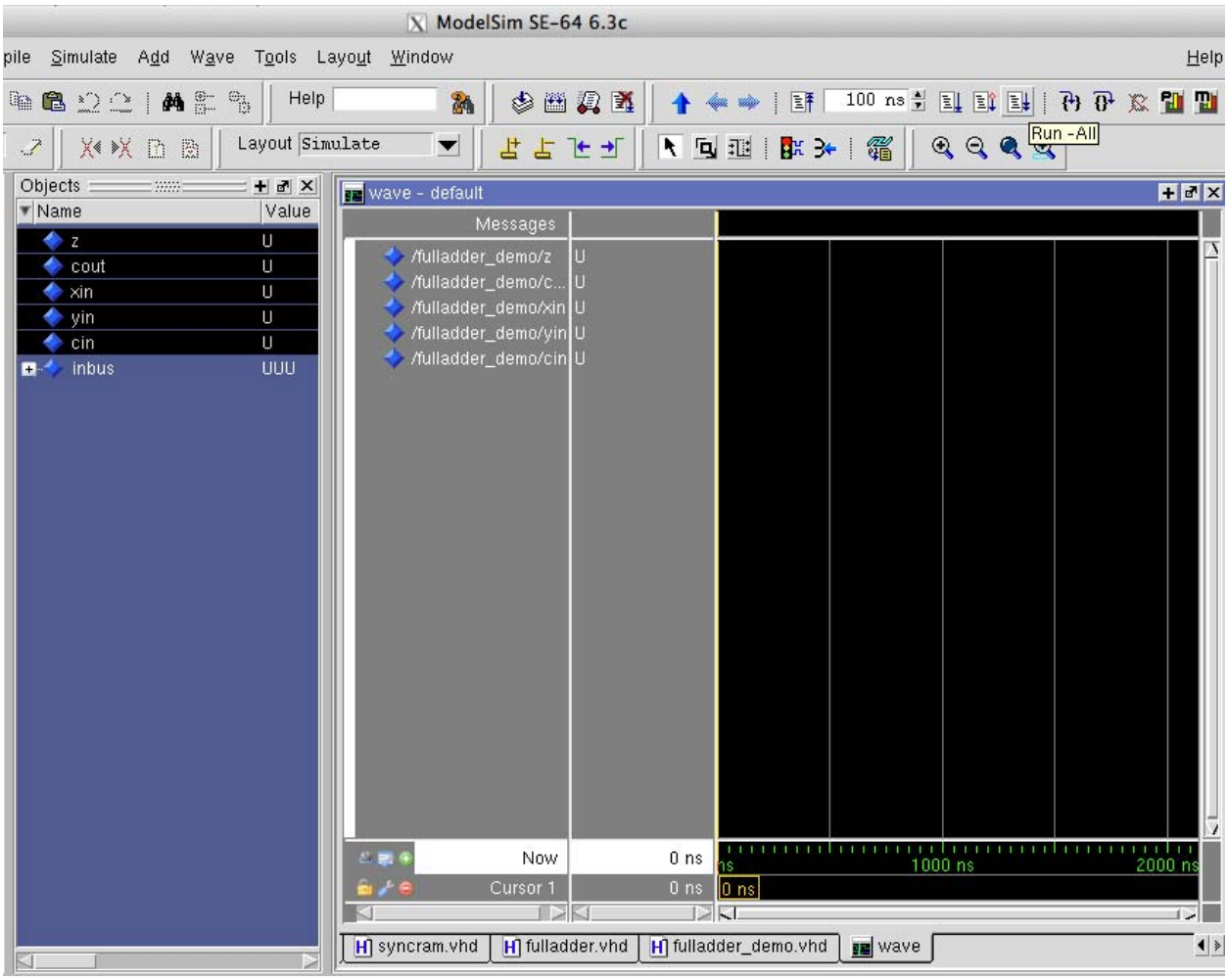


3. Select the structural design of your testbench (e.g., fulladder_demo) to simulate. The fulladder_demo is in work library.

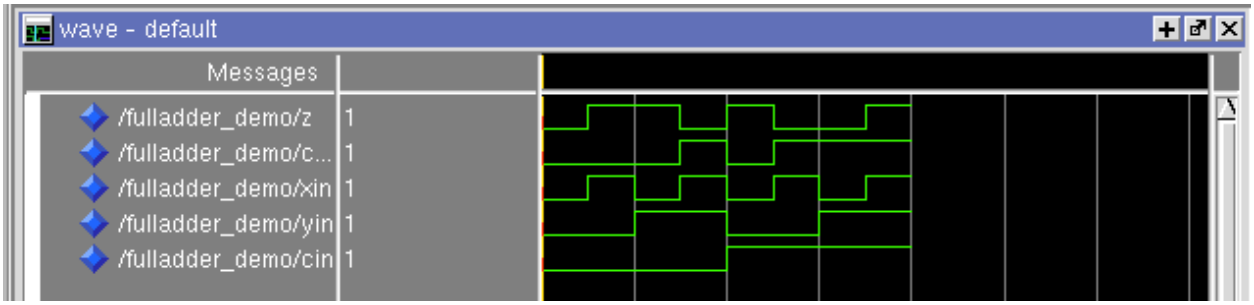


4. A simulation window will pop out. In the Objects window in the middle, Click on “Add items to wave” > “All items in region and below”.

5. A wave window will appear in the right. Click “Run -All” button  .



6. The simulate will start and finish shortly. The zoom level might not fit the waveform. Zoom in or out to adjust the waveform.



7. The waveform should be something similar to the above figure.