CS/ECE 552 Spring 2019
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Note: Tutorial assumes you are using bash

Steps to Setup ModelSim

1. ssh <username>@royal-01.cs.wisc.edu

2. Add the below line to ~/.bashrc file

export MGC_HOME=/s/mentor-2018/@sys/V10.0BSXE/MGC_HOME.ixl

export SDD_HOME=/s/mentor-2018/@sys/V10.0BSXE/SDD_HOME

export PATH=$PATH:/s/mentor-2018/@sys/bin:/s/mentor-2018/@sys/bin.pclinux:/s/mentor2018/@sys/V10.0BSXE/MGC_HOME.ixl/bin:/s/mentor-2018/@sys/modelsim_dlx/bin

export MGLS_LICENSE_FILE=/s/mentor-2018/etc/cust/mgls/mgc.licenses

3. source ~/.bashrc

4. Create a directory called CS/ECE552 in your workarea and run **vsim &**

5. To run your simulation, you will need to create a project.
Click on File -> New -> Project. You will see the window presented below. Choose a location for your new project and give it the name. Leave the other settings to their default. This just says that all code will be compiled into the library "work".
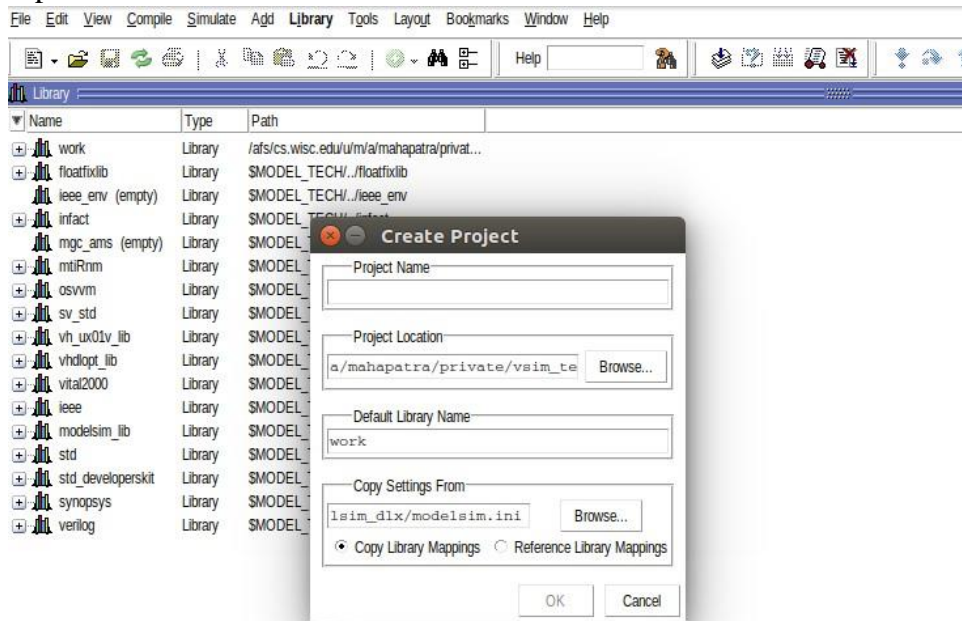
6. Click on Add Existing File as shown in the picture. Download test.v and test_tb.v from Canvas. Navigate to the location where you downloaded test.v and test_tb.v and add both of those to your project. Keep other settings at their default. Click OK when done.
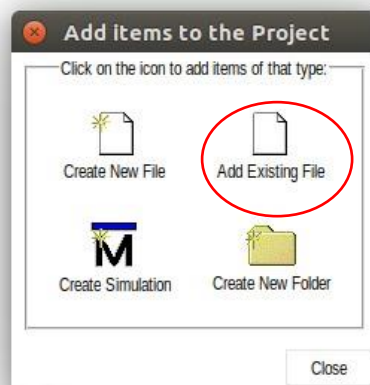
7. You will need to compile the source files first. To do this, right click on test.v, click on Compile, then click on Compile All. You should see messages in the Console window appear in green that the compile was successful.

8. To start your simulation, click on Simulate in the Menu Bar, then click Start Simulation. This opens the Start Simulation Window. Click on the plus sign next to work, then click on the plus sign next to arith_tb. Make sure you select arith_tb and not arith as we want to simulate the design at the test bench level. Once arith_tb is highlighted, click OK.
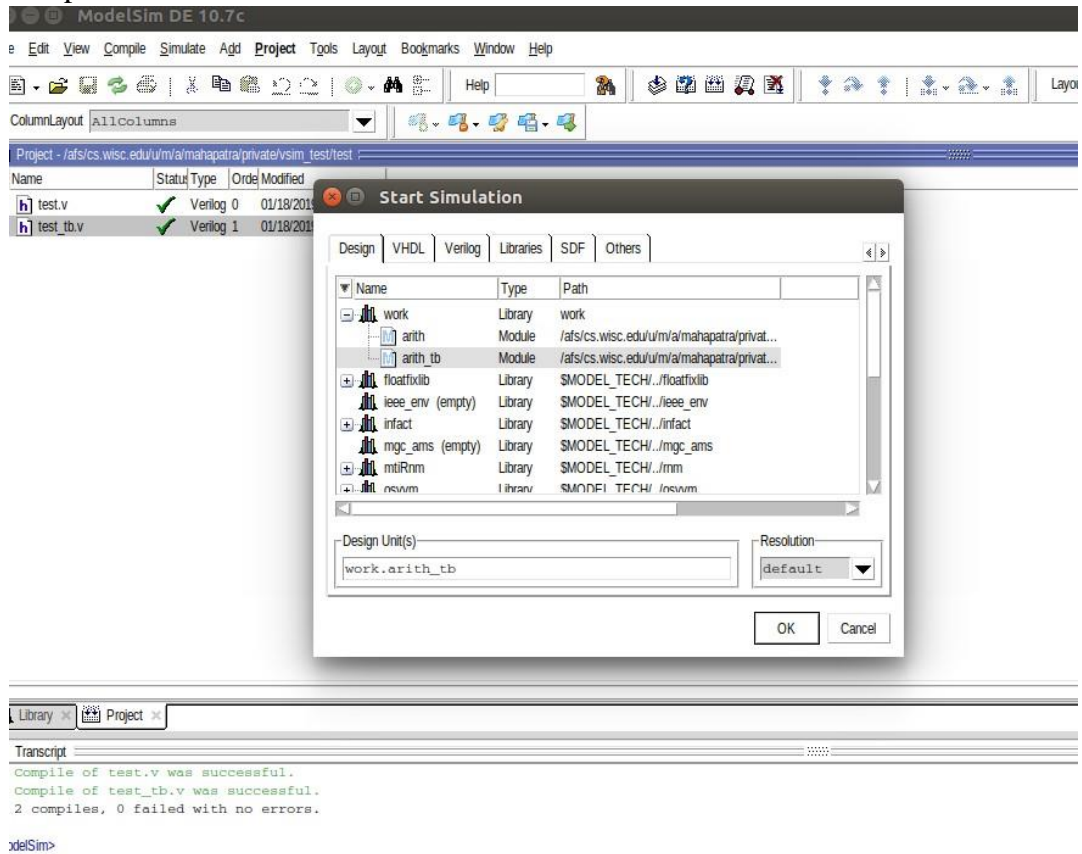
9. Click on Simulate → Run → Run-All. You should see "MODELSIM SETUP SUCCESSFUL"
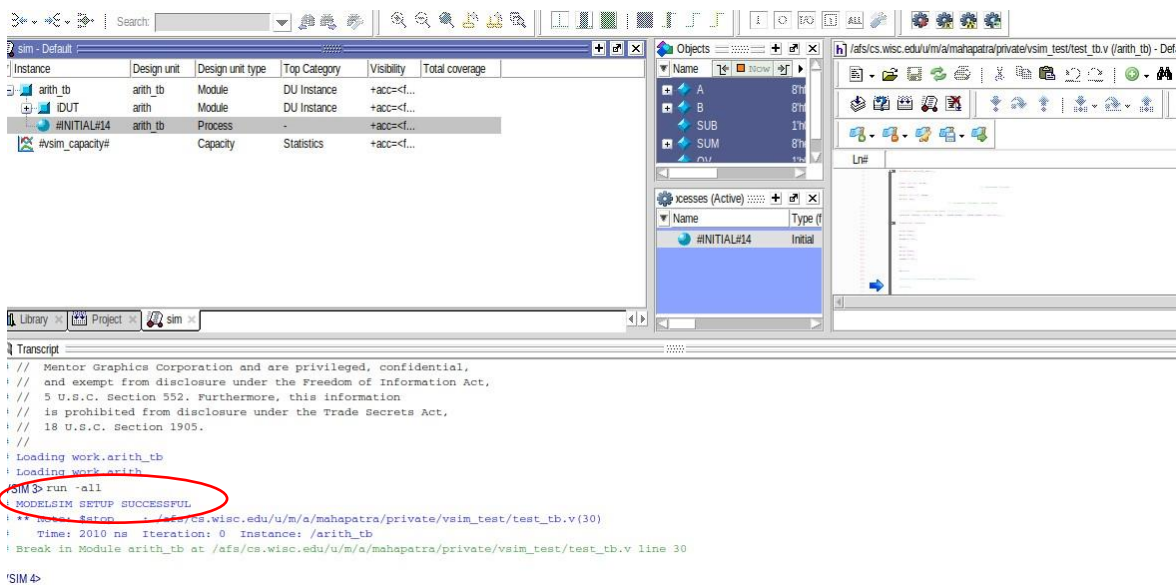
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FAQs

Q1. For errors related to DISPLAY not set

- For Windows, download and install [Xming](). For X forwarding to work, you'll need to start Xming before connecting to the remote system with your SSH client (e.g., PuTTY).
- For Mac OS X 10.8 and later, download and install [XQuartz](). For X forwarding to work, you'll need to start XQuartz before making an SSH connection to the remote system. Once XQuartz launches, you can use X forwarding with SSH from the Mac OS X Terminal or from the `xterm` application in XQuartz.

The ssh command to log onto CS machines will be: ssh -Y <user_name>@best-linux.cae.wisc.edu
To launch Modelsim you simply need to type "vsim".