

# Assignment 1 - Running Modelsim Tutorial

This is a quick introduction on how to SSH into the ECE Linux Server and how to use Modelsim. Please go to the TAs office hours if you are unsure on how to set this up.

## SSH into the ECE Linux Servers

- 1) Download Anywhere Connect to VPN - Instructions below:
  - a) iOS: <https://faq.oit.gatech.edu/content/how-do-i-install-cisco-anyconnect-client-os-x>
  - b) Windows: <https://faq.oit.gatech.edu/content/how-do-i-install-cisco-anyconnect-client-windows-7-and-8>
- 2) Download SSH client
  - a) iOS: XQuartz
    - i) <https://www.xquartz.org/>
    - ii) Left click the XQuartz icon → Applications → Terminal
    - iii) In the xterm, type: **ssh -Y <gt-account>@ecelinsrvy.ece.gatech.edu** and press enter
  - b) Windows: PuTTY or MobaXterm
    - i) <https://mobaxterm.mobatek.net/>
    - ii) Session - SSH
      - (1) Remote host: **<gt-account>@ecelinsrvy.ece.gatech.edu**

Great! Now you should be in the ECE server!

## Opening a project in Modelsim

- 1) Copy the VHDL skeleton files into the server (Hint: look into scp)
- 2) In the terminal, type: **source /tools/mentor/modelsim/ms106a/cshrc.modelsim**
- 3) Type: **vsim &** → The Modelsim GUI should appear
- 4) File → New → Project → Change Project Name and Location and press ok
- 5) Add Existing File → Browse → Open all of the vhd files

## Compiling and Running a project in Modelsim

- 1) Compile → Compile All
- 2) Simulate → Start Simulation → Under work, select the top file (for the first assignment, it will be spim\_pipe) → Optimization Options → Apply full visibility ... → Press ok
- 3) In the 'sim' GUI panel, left click on spim pipe → Add to → Wave → All items in region and below
- 4) In the 'transcript' GUI panel, type: **run 10000** to generate the waveforms