

EECS 645 Computer Architecture

Homework 3. Due Feb 18, 2020 at 4:00pm.

Go to

<https://www.nand2tetris.org/software>

read the instructions and download and setup the software for your computer.

Ignore the projects folder that comes with it. We will not use those at all.
We will only be using the hardware simulator in this course.

Extract the provided z80hdl folder for use.

Load the Xor file included in this zip file into the hardware simulator. Run the included Xor.tst and use it to verify you have a functional setup.

Review the tutorial at https://b1391bd6-da3d-477d-8c01-38cdf774495a.filesusr.com/ugd/44046b_bfd91435260748439493a60a8044ade6.pdf

In this homework you will implement the following logic blocks using the provided templates, and test files. I recommend you implement them in the following order, and after verifying a module, I encourage to use it where applicable in the following modules.

Not

And

Or

Not8 Bitwise Not, 8 bits wide

And8

Or8

Xor8

Half Adder

Full Adder

Add8

I have provided a fully functional Xor.hdl module and Xor4.hdl module. I recommend reviewing them and verifying them with their test scripts before starting on your own.

Only use nand gates or other modules you have built.