

ECE 379
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LC3 Simulator tutorial:

1. Entering your program in machine language:
 - a. At the console prompt, type (the file name must end with .bin)
`emacs <file_name>.bin &`
 - b. Type in the machine instructions and save

2. Creating an object file for your program
 - a. At the console prompt, type
`lc3convert -b2 <file_name>.bin`

This should generate a <file_name>.obj file.

3. Using the graphical simulator
 - a. At the console prompt, type
`lc3sim-tk &`

This should launch two windows: a simulator interface and a LC-3 Console.

- b. Go to the simulator interface and click on the 'Browse' button. Choose the <file_name>.obj file and open it.
- c. Click on the 'Next' button to simulate just one instruction or click on 'Continue' to simulate all the instructions in your program.

To try this for yourself:

1. go to your home directory
`cd ~`
2. setup a directory for ece 379
`mkdir 379_code`
3. go to the 379_code directory
`cd 379_code`
4. copy the addnums.bin file to your directory
`cp ~/mikko/public_html/379/addnums.bin .`
5. you can open the file using a text editor
`emacs addnums.bin`

Note: make sure that you understand the code before progressing

6. convert the addnums.bin file to an object file
lc3convert -b2 addnums.bin

Note: this will generate a addnums.obj file that will be used with the graphical simulator

7. To start the simulator, type
Lc3sim-tk &
8. Go to the simulator interface and click on the 'Browse' button. Choose the addnums.obj file and open it.
9. Click on the 'Next' button to simulate just one instruction or click on 'Continue' to simulate all the instructions in your program.