## Programming Lab 0: Introduction to LC3

EE 306: Introduction to Computing Professor: Dr. Al Cuevas TAs: Apurv Narkhede, Nic Key, Ramya Raj, Jerry Yang

Due: 9/17/2018

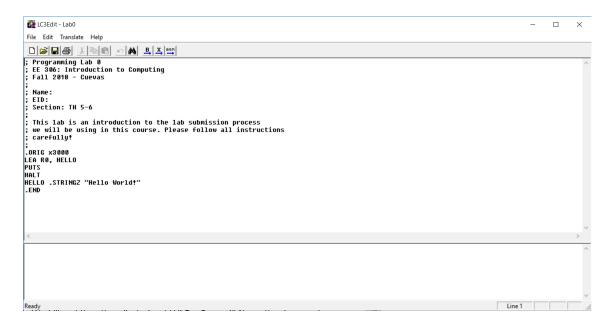
## 1 Overview

This lab is intended to familiarize you with the LC3 editor, LC3 simulator and the programming lab submission process. Some of you may have never coded before; that is fine. You will not need to know how to write code for this lab. By the end of this lab, you should be able to:

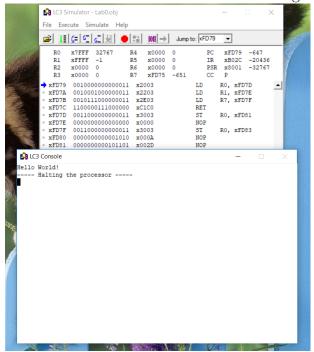
- edit code in LC3Edit.
- convert and assemble written code in LC3Edit.
- load a .obj file into the LC3 simulator.
- run and step through a program in the LC3 simulator.
- set breakpoints in the LC3 simulator.

## 2 Procedure

- 1. Read through the "LC3 Getting Started" guide under Files → LC3 Reference Materials. Pay close attention and follow along with chapters 1 and 5. These chapters will give you a general idea of the LC3 workflow. You can skim the rest you don't need to know what registers, instructions and memory are...yet. But if you're curious, don't hesitate to ask!
- 2. Download the starter file from the Lab 0 assignment on Canvas. Open the starter file in LC3Edit. You should see this:



- 3. Use the asm in the menubar button to generate the .obj file.
- 4. Load the .obj file into the LC3 simulator.
- 5. Run the starter code in LC3. You should get a screen that looks like this:



- 6. Edit the header to include your name, EID and section meeting time.
- 7. Modify the "Hello, World!" text to say "Hi Dr. Cuevas!"
- 8. Re-generate the .obj file, and rerun the code in LC3 to verify that it prints correctly.

## 3 Submission

- 1. Rename the .asm file "EIDLab0.asm", replacing "EID" with your EID.
- 2. Submit the .asm file (and ONLY the .asm file) to the Lab 0 Canvas assignment. Do NOT include any other files.
- 3. If you do not follow these submission instructions exactly, the autograder will spit out a 0!