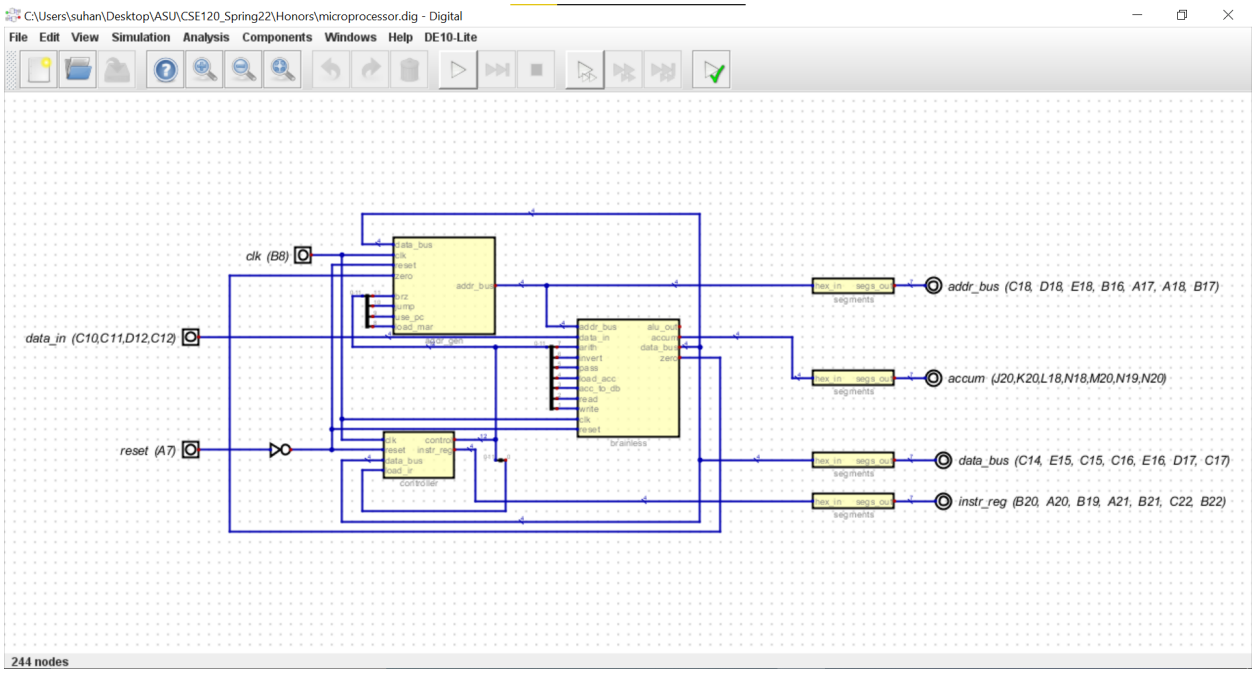
EEE/CSE 120
Honors Project

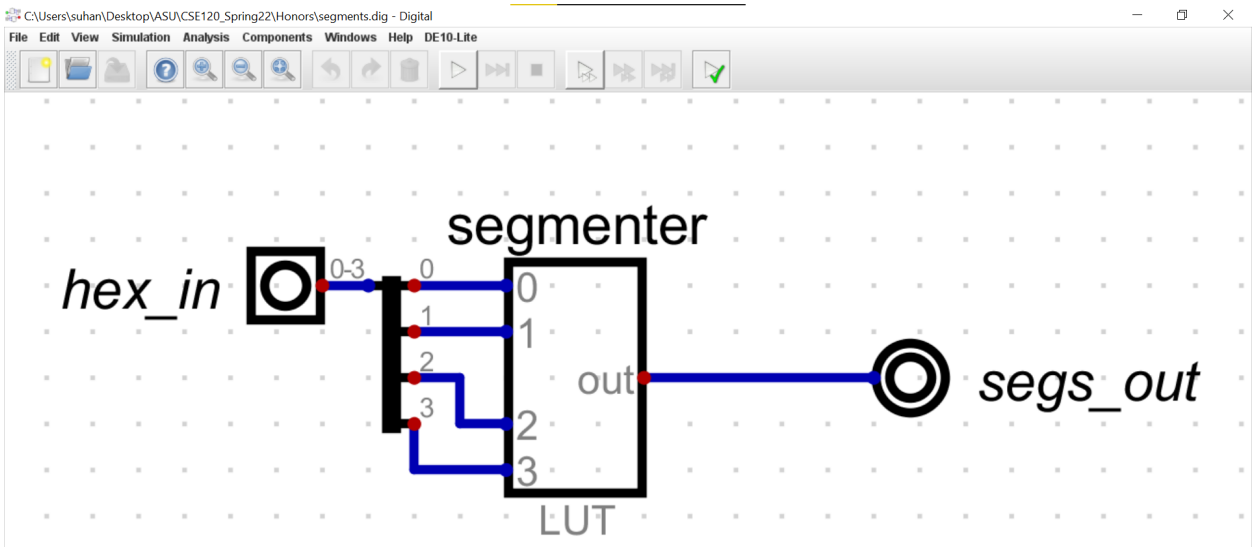
Name: Suhani Singh
Instructor: Dr. Michael Goryll
Class Time: MW 1:30 pm - 2:45 pm
Date: 4/29/22

Digital Schematics:

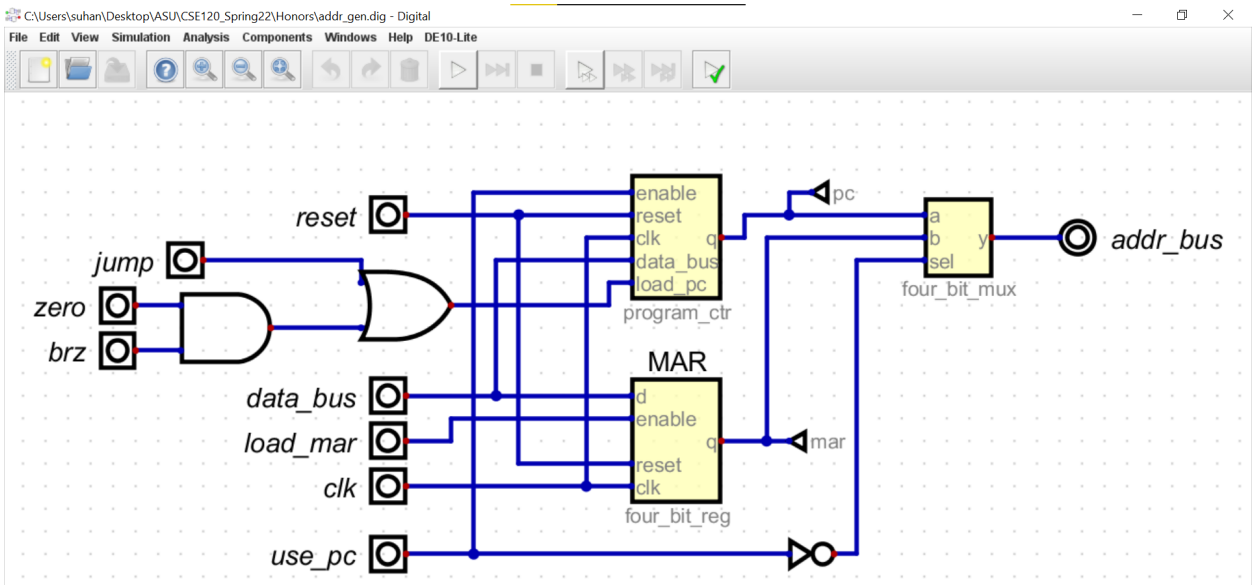
- **Microprocessor:**



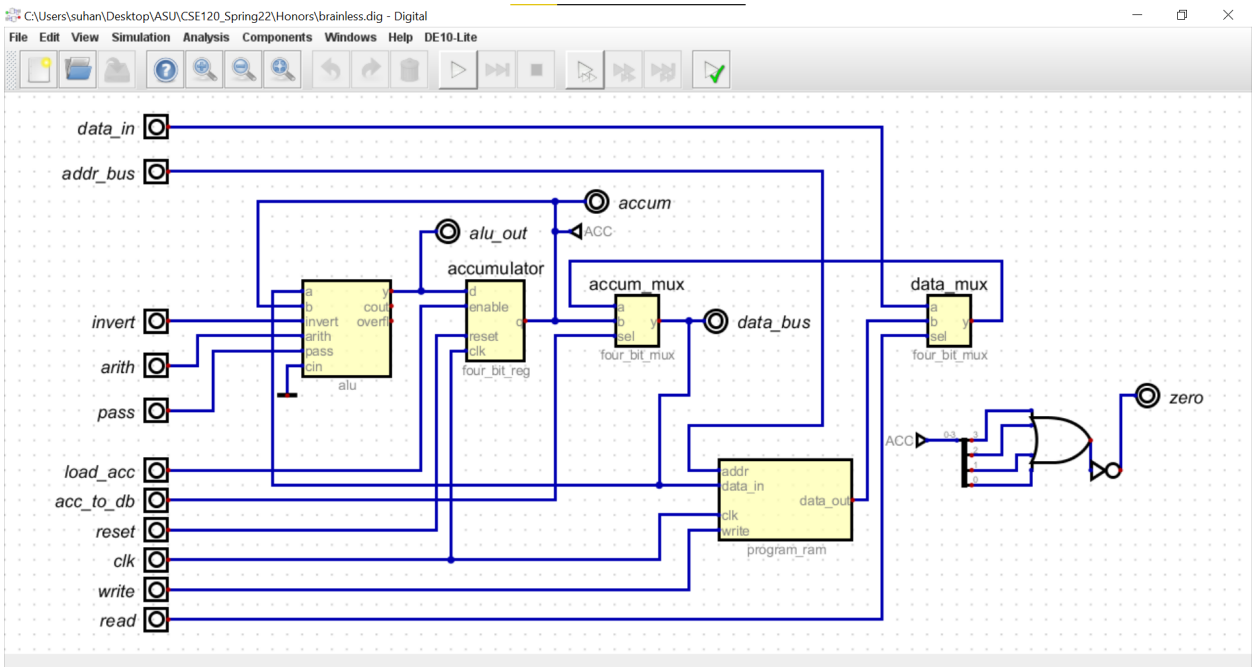
- **Segments:**



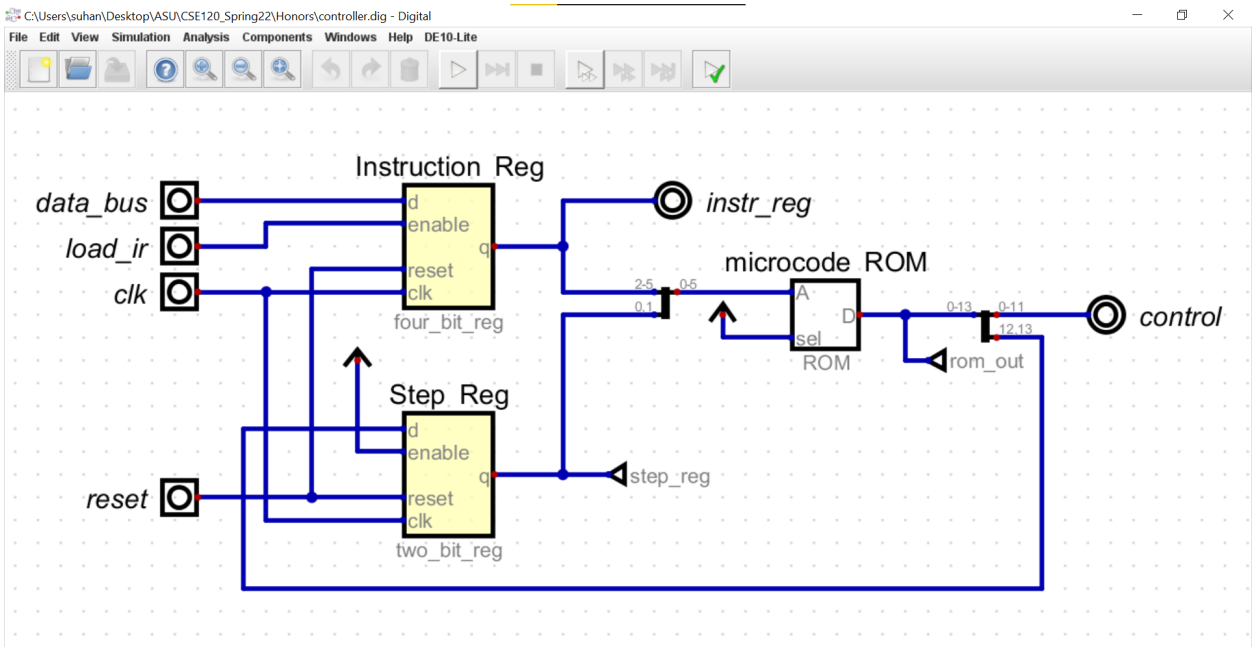
- **Address Gen:**



- **Brainless:**



- **Controller:**



Hex Files:

- **ram_vals 1:**

ram_vals - 1 - Notepad

File Edit Format View Help

```
v2.0 raw
0x0    #0 Load ACC
0x1    #1 a nonzero value
0x9    #2 BRZ instruction
0x9    #3 not taken since accum is not 0
0x0    #4 LOAD ACC
0x0    #5 zero!
0x9    #6 BRZ instruction
0x9    #7 branch to address 0xA
0x0    #8 Load ACC
0x5    #9 this should be skipped!
0x2    #10 STOP
```

- **ram_vals 2**

ram_vals - 2 - Notepad

File Edit Format View Help

```
v2.0 raw
A    #0 LoadDataInAcc
9    #1 BRZ
7    #2 line to go to
5    #3 SUB instruction
1    #4 val to subtract
8    #5 JUMP
0    #6 line to go to , #1
2    #7
2    #8
2    #9
2    #10 STOP
```

- **rom_vals:**

rom_vals - Notepad

File Edit Format View Help

```
v2.0 raw
1205 # LOAD ACC; Load IR
0234 #  Load ACC
0000 #  unused
0000 #  unused
1205 # ADD ACC; Load IR
0294 #  ADD
0000 #  unused
0000 #  unused
1205 # STOP; Load IR
1000 #  stay here
0000 #  unused
0000 #  unused
1205 #  AND; Load IR
0214
0000
0000
1205 #  ZERO; Load IR
00D8
0000
0000
1205 #  SUB; Load IR
02D4
0000
0000
1205 #  STORE ACC; Load IR
2304
000A
0000
1205 #  Extra Credit; Load IR
0274
0000
0000
1205 #  Jump; Load IR
0604
0000
0000
1205 # BRZ; Load IR
0A04
0000
0000
1205 # LoadDataInAcc
0030
0000
3FFF
```