Lab Report

ECPE 170 – Computer Systems and Networks – Spring 2018

Name: Melissa Chow

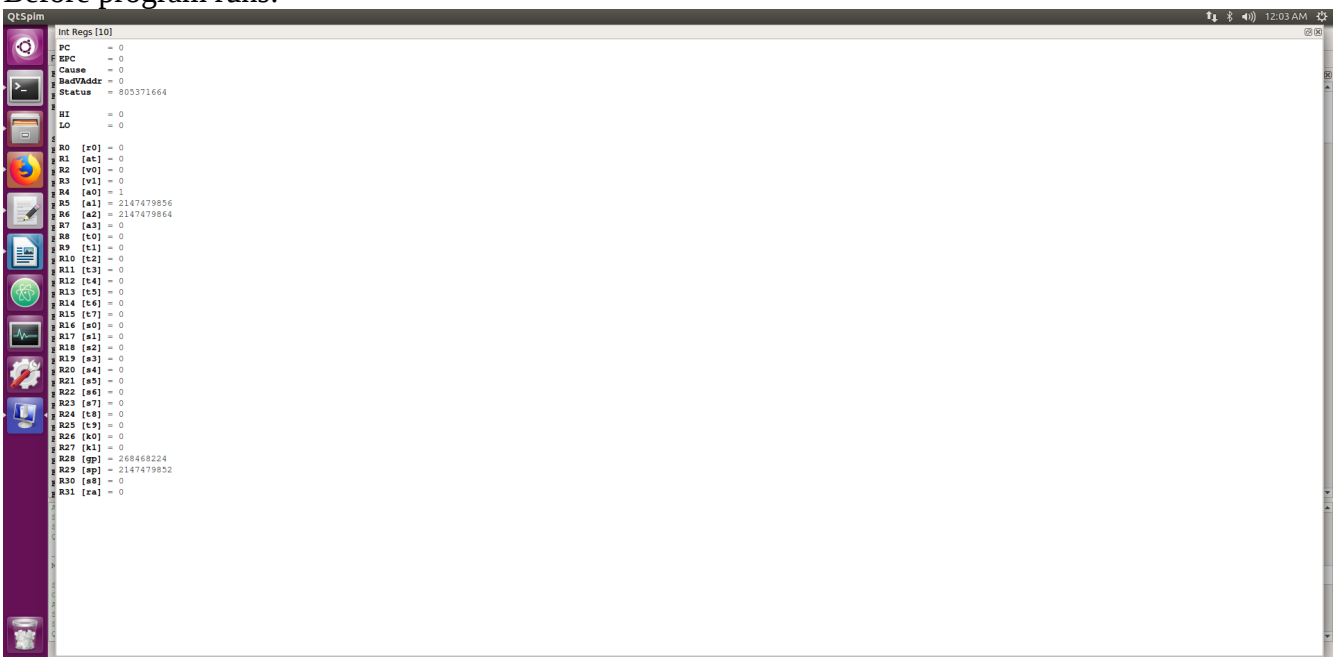
Lab Topic: MIPS Assembly Programming (Basic) (Lab #: 10)

PART 1:

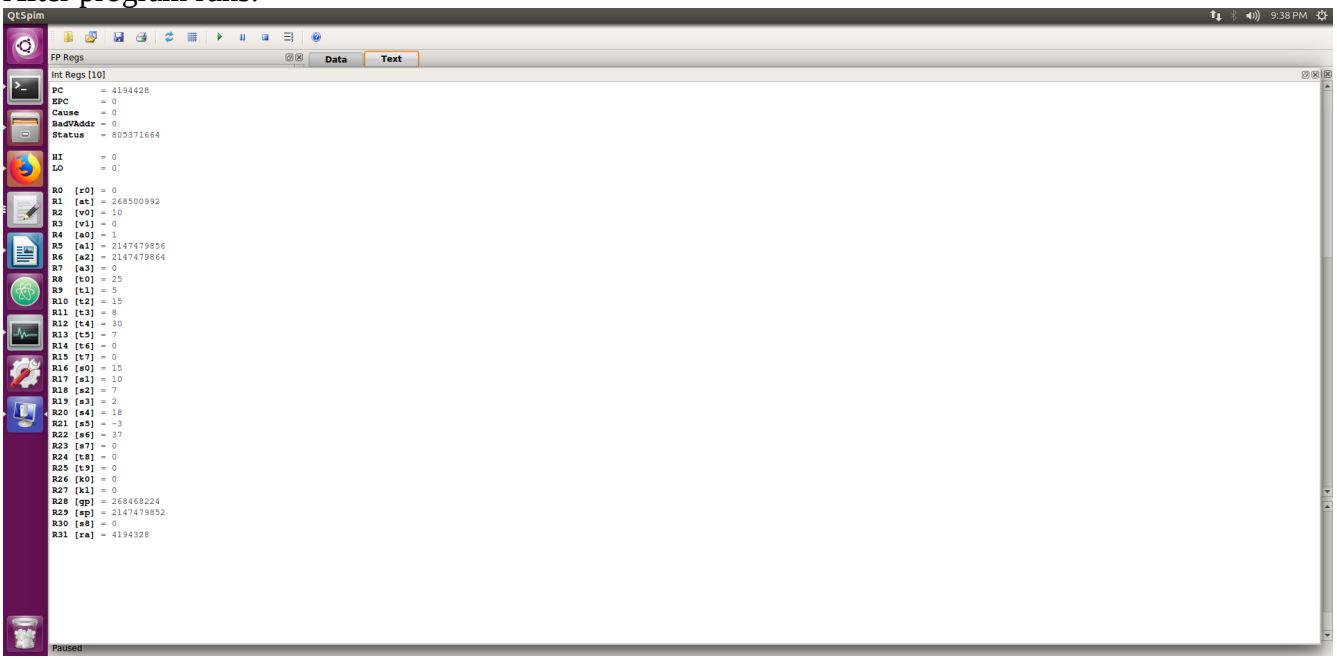
Question #1:

Take two screenshots of the MIPS register panel: one before your program runs, and one after your program finishes. Put the register panel in Decimal mode (right-click) so it is easy to see register values.

Before program runs:



After program runs:

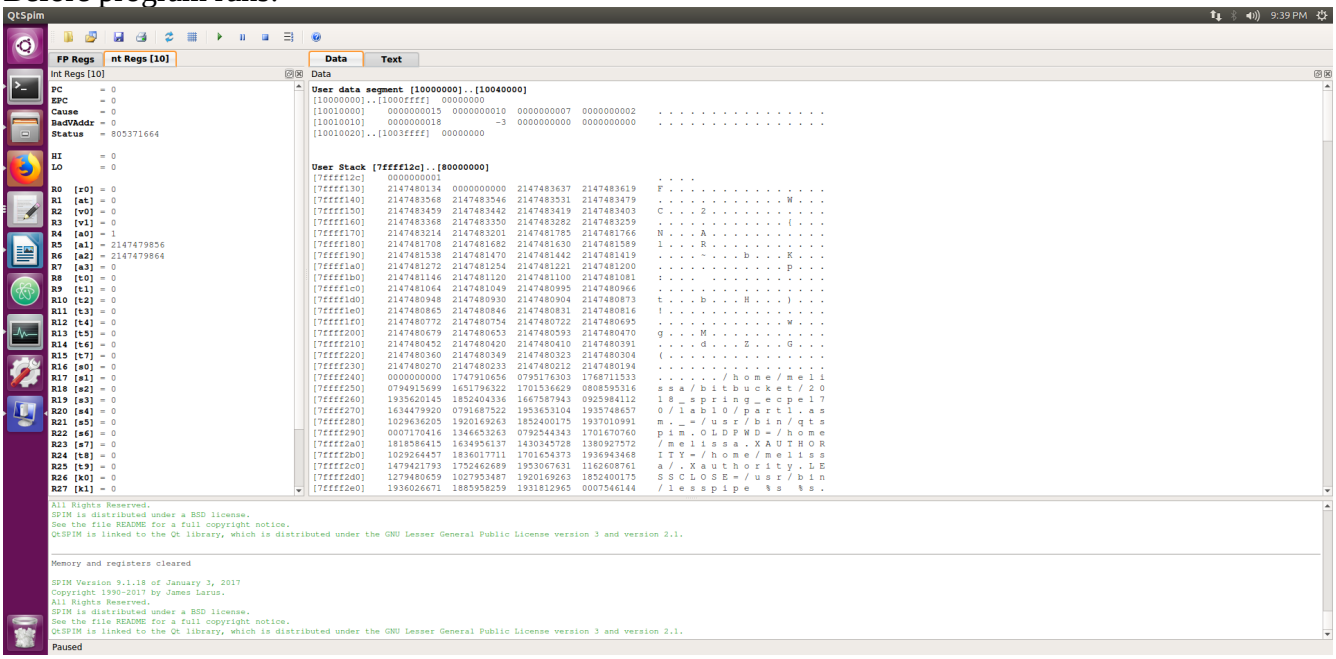


Question #2:

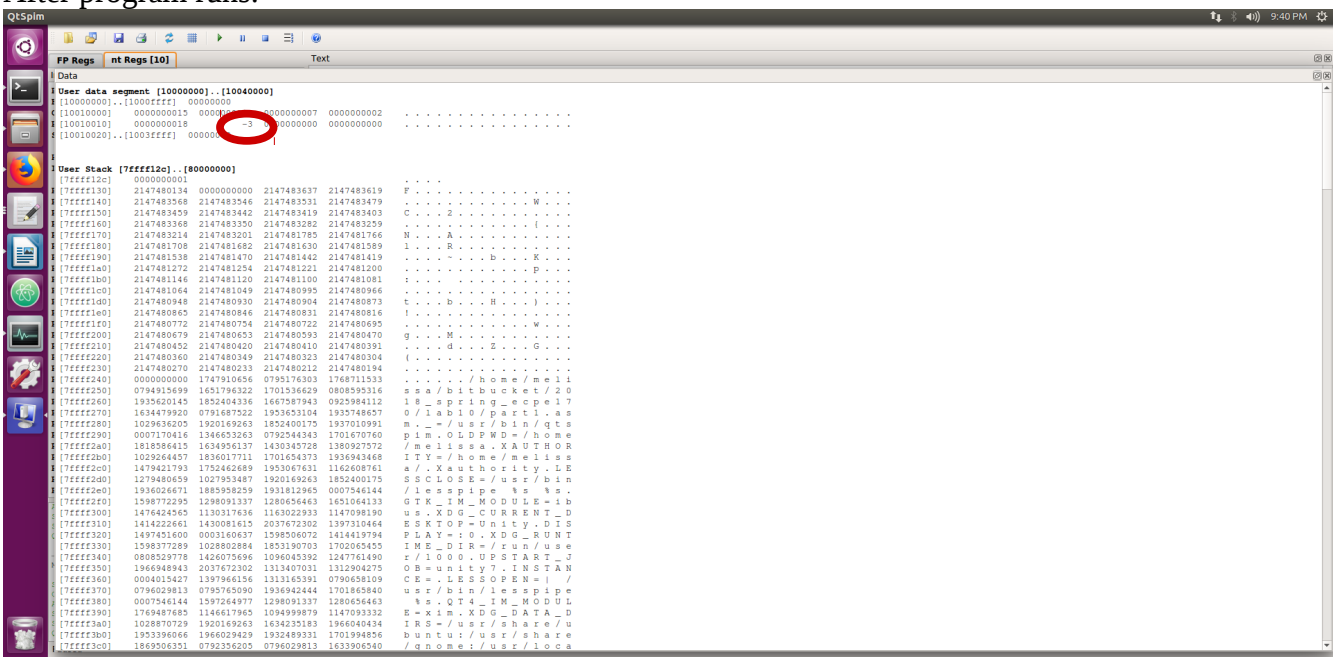
Take two screenshots of the MIPS memory panel (data tab): one before your program runs, and one after your program finishes. Put the memory panel in Decimal mode (right-click), so it is easy to see memory values. In the after-execution capture, **circle the memory location (not register) that**

contains the final calculated value of Z.

Before program runs:



After program runs:

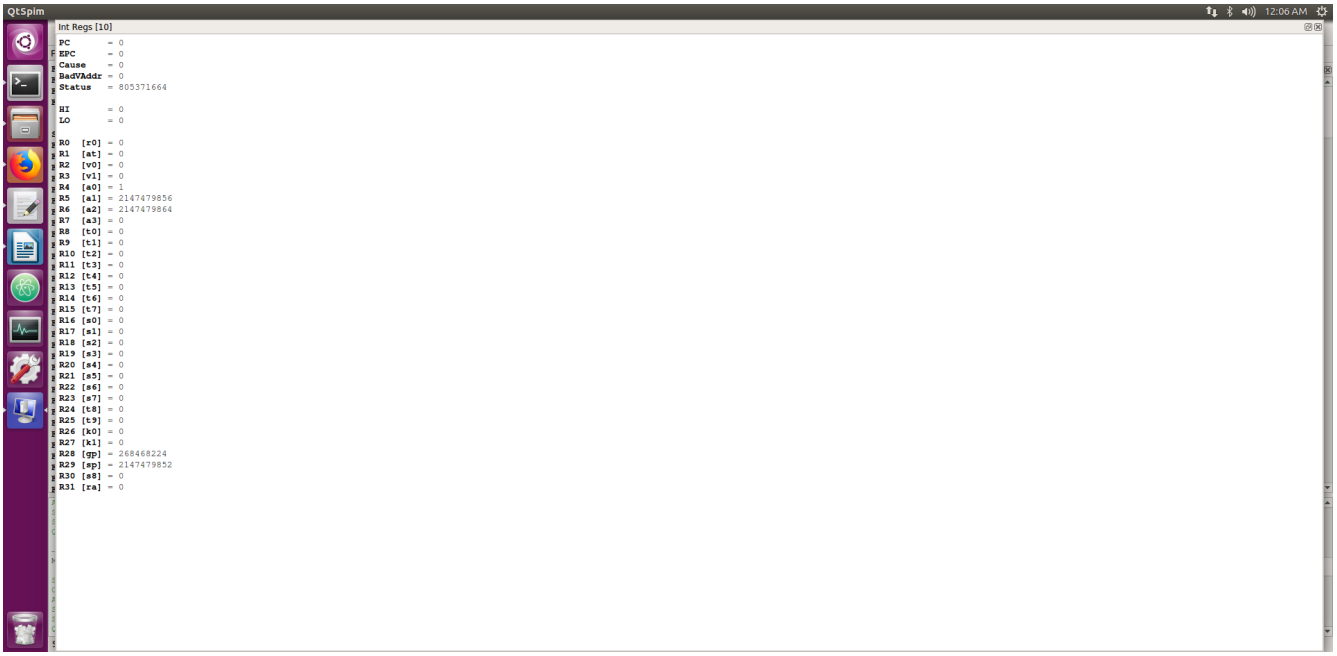


PART 2:

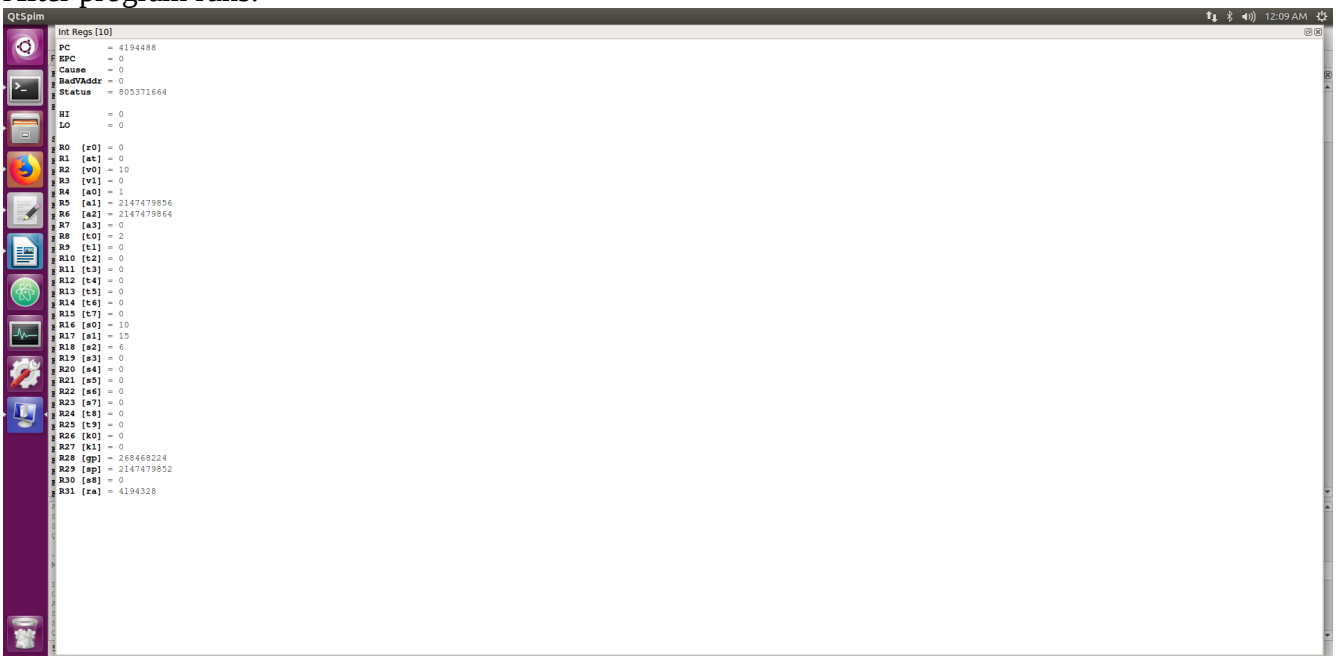
Question #3:

Take two screenshots of the MIPS register panel: one before your program runs, and one after your program finishes. Put the register panel in Decimal mode (right-click) so it is easy to see register values.

Before program runs:



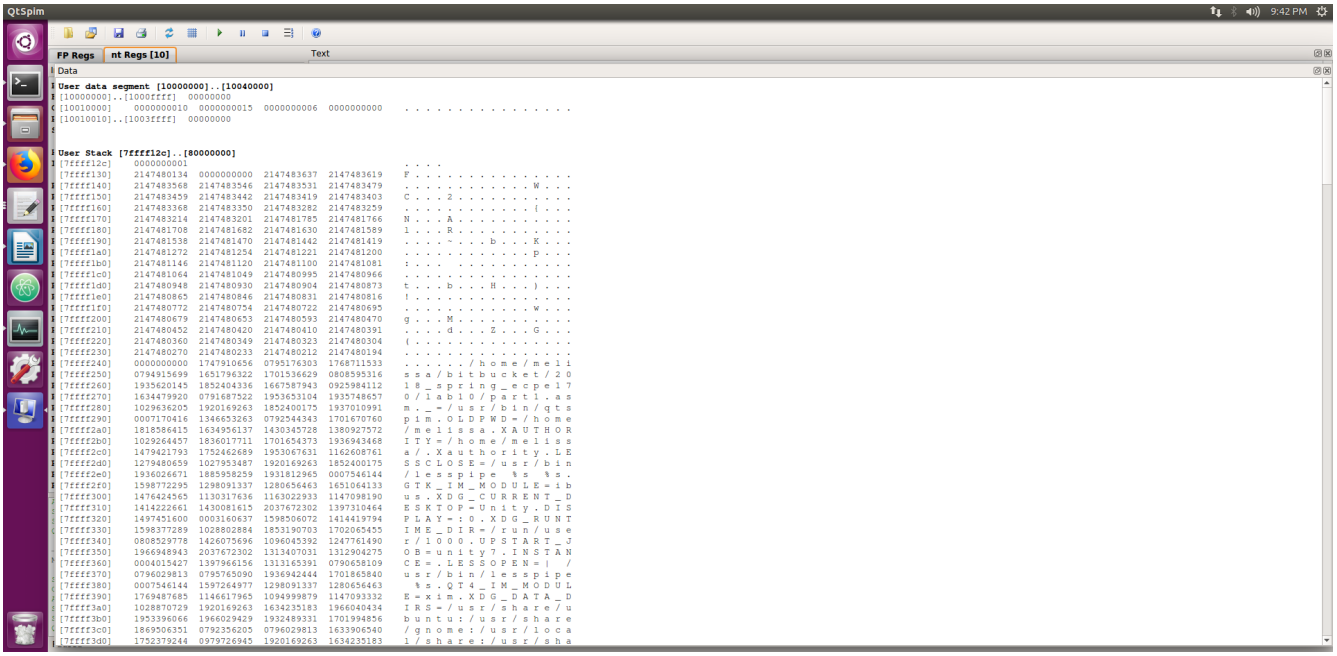
After program runs:



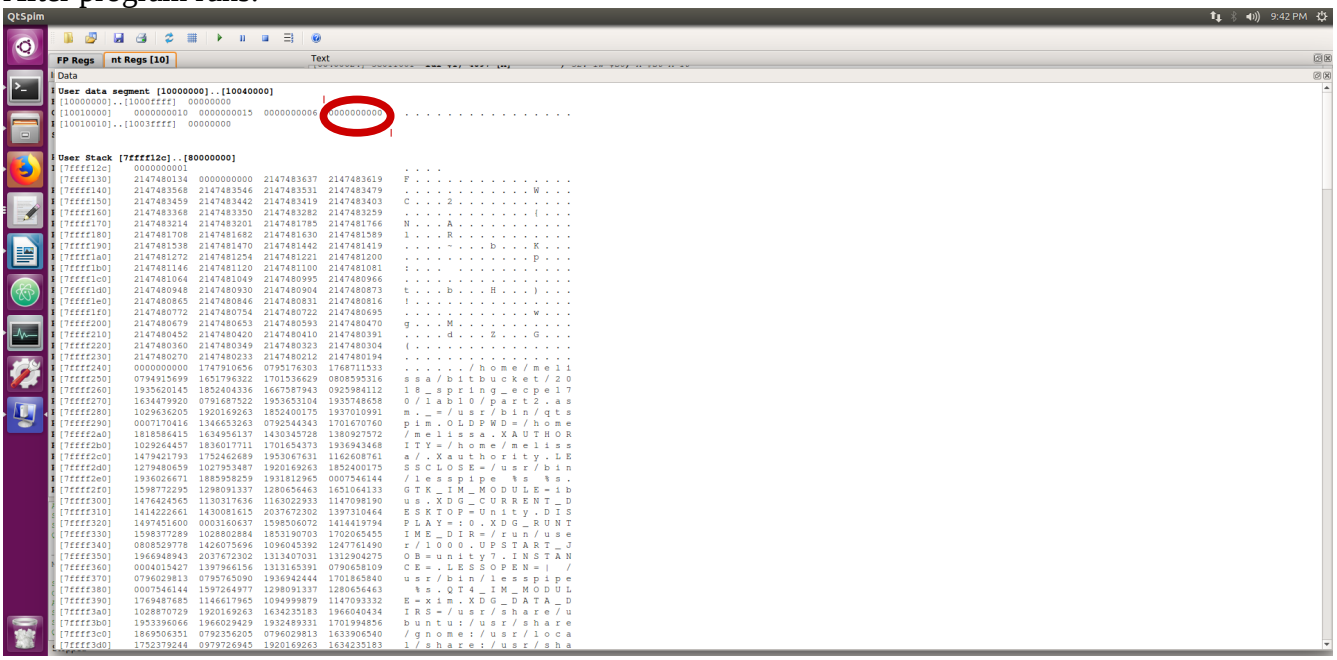
Question #4:

Take two screenshots of the MIPS memory panel (data tab): one before your program runs, and one after your program finishes. Put the memory panel in Decimal mode (right-click), so it is easy to see memory values. In the after-execution capture, **circle the memory location (not register) that contains the final calculated value of Z**.

Before program runs:

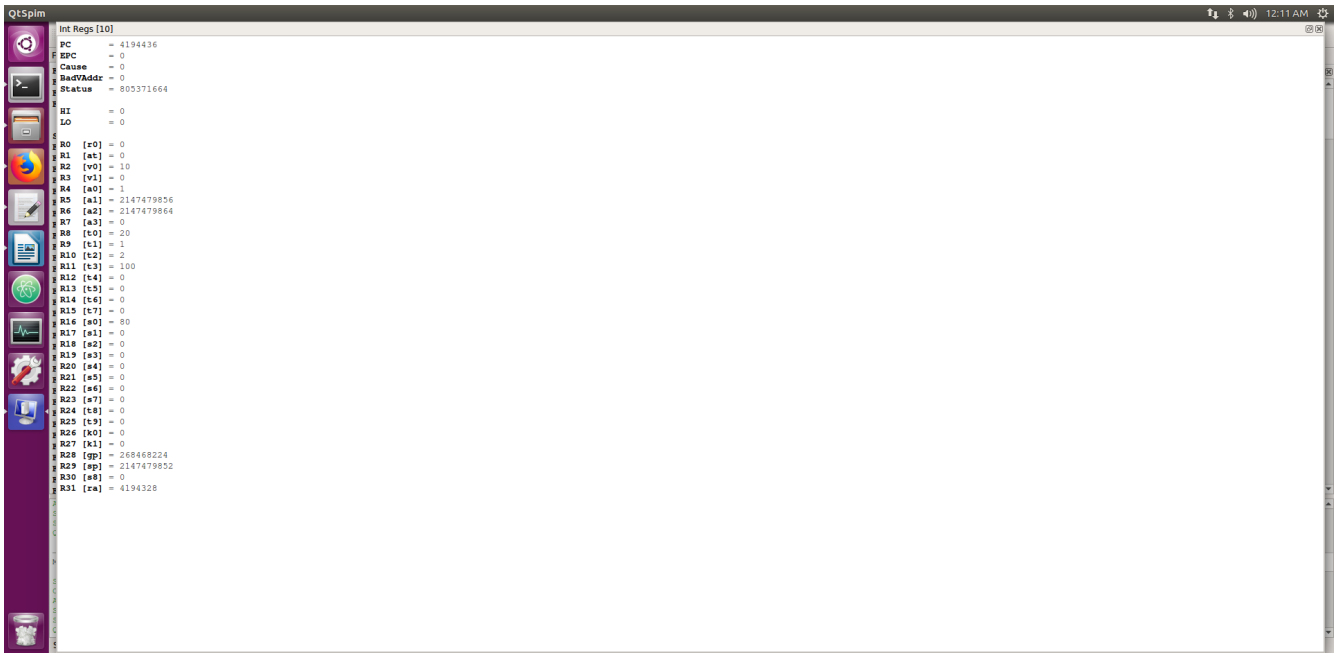


After program runs:



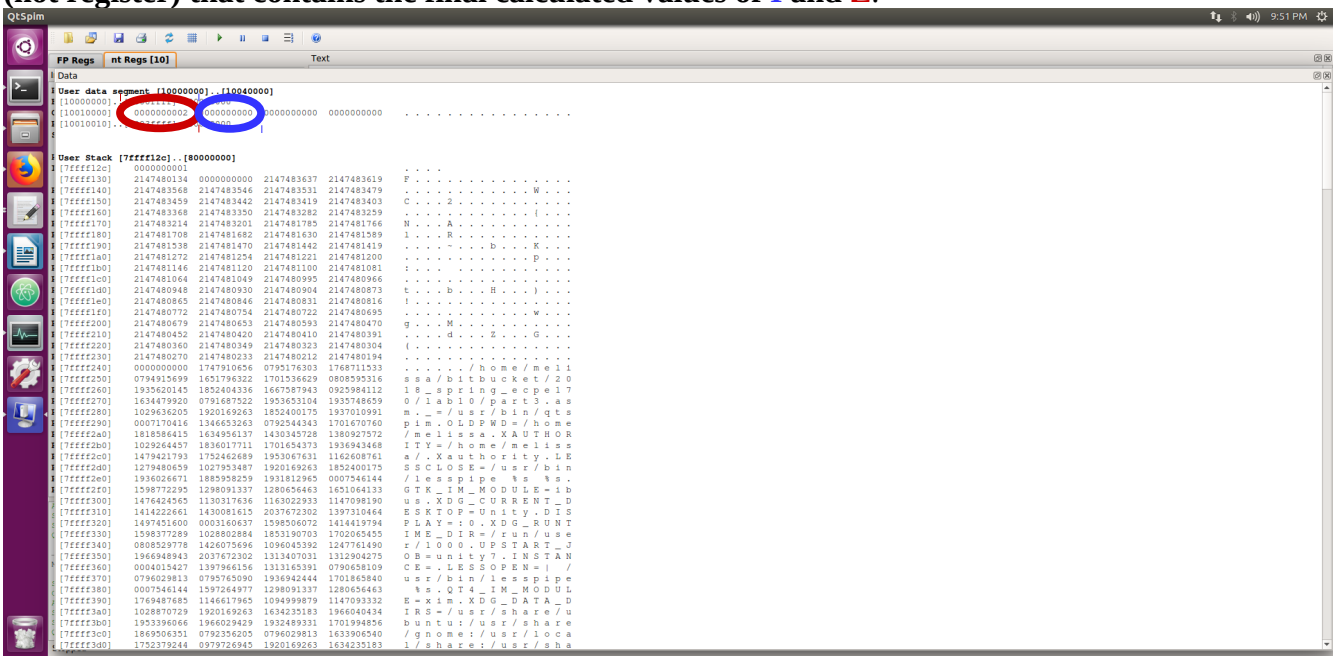
PART 3:
Question #5:

Take a screenshot of the MIPS register panel after your program finishes. Put the register panel in Decimal mode (right-click) so it is easy to see register values.



Question #6:

Take a screenshot of the MIPS memory panel (data tab) after your program finishes. Put the memory panel in Decimal mode (right-click), so it is easy to see memory values. **Circle the memory location (not register) that contains the final calculated values of I and Z.**

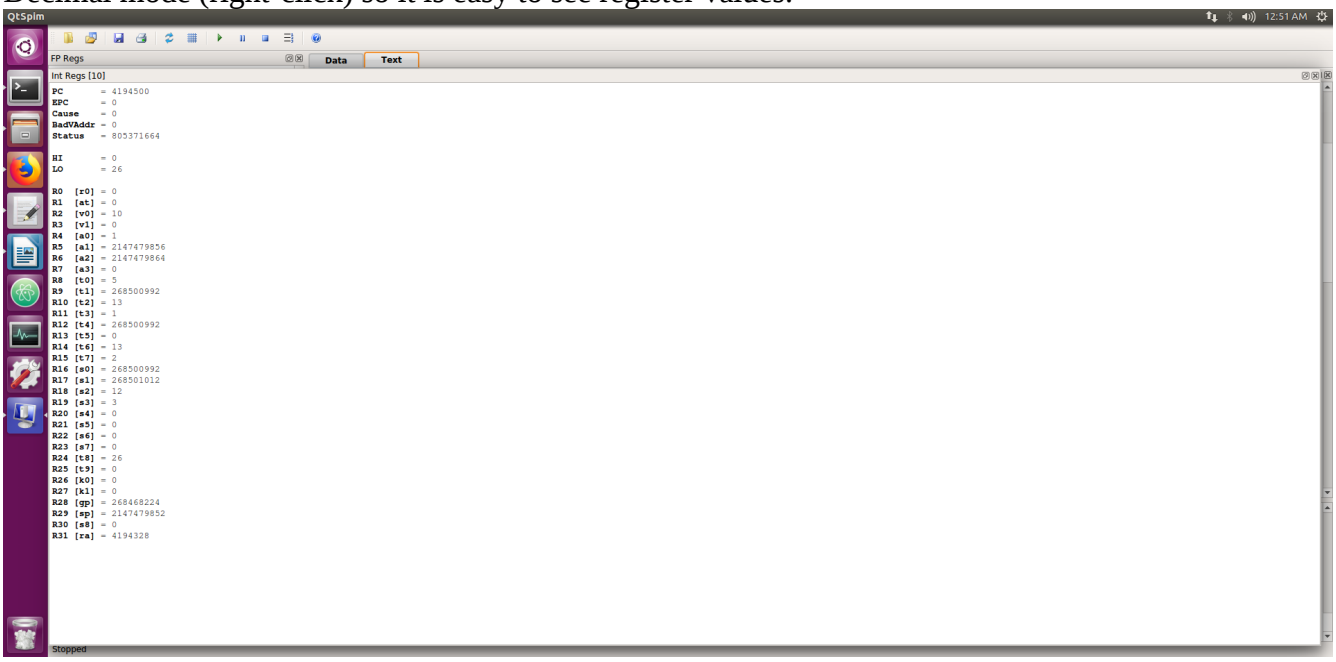


PART 4:

Question #7:

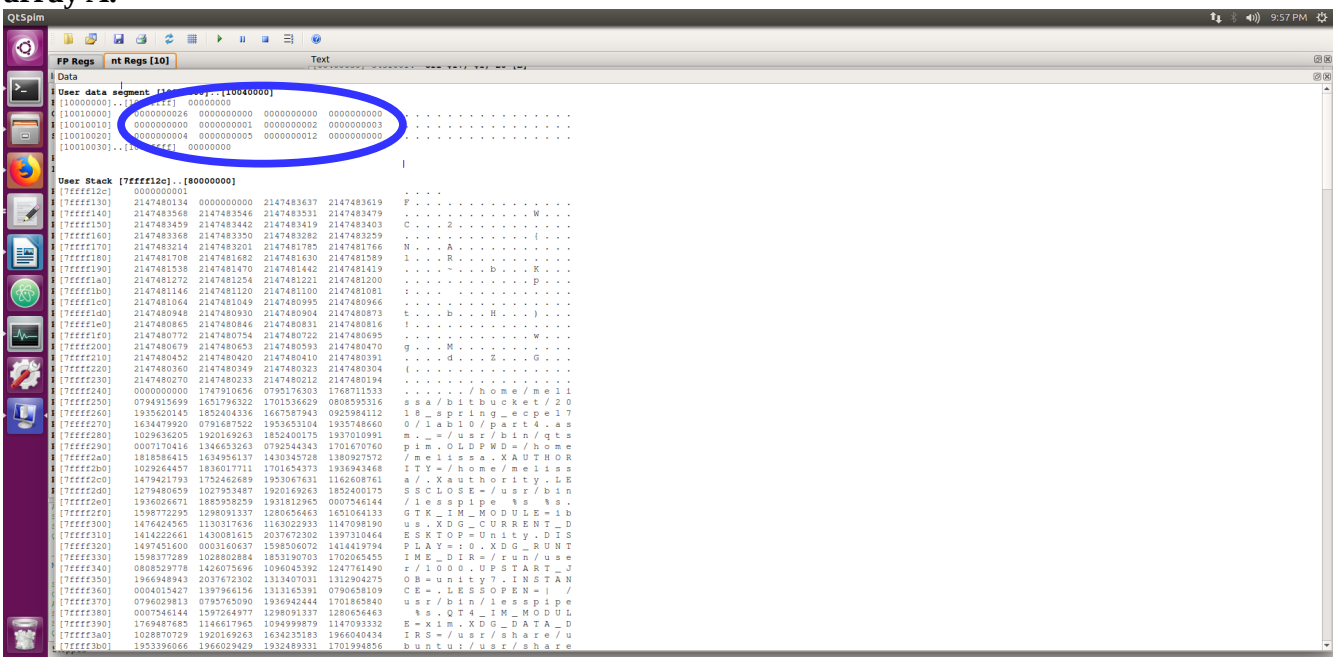
Take a screenshot of the MIPS register panel after your program finishes. Put the register panel in

Decimal mode (right-click) so it is easy to see register values.



Question #8:

Take a screenshot of the MIPS memory panel (data tab) after your program finishes. Put the memory panel in Decimal mode (right-click), so it is easy to see memory values. **Circle the final values of array A.**

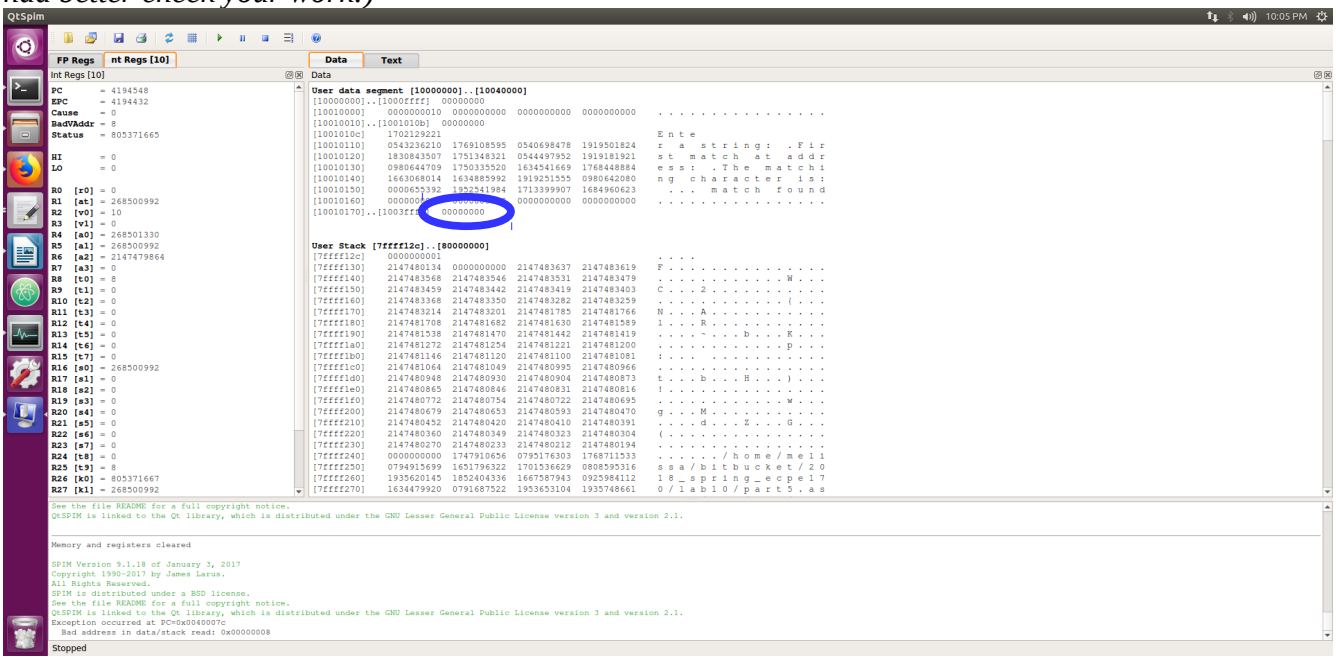


PART 5:

Question #9:

Take a screenshot of the MIPS memory panel (data tab) after your program finishes. Put the memory panel in Hex mode (right-click), since Decimal mode will not allow us to distinguish between bytes.

Circle two things: the final value of the pointer 'result' in memory, and the corresponding location that result points to. Does that location in memory contain the ASCII code for the character 'e'? *(If not, you had better check your work!)*



Yes.

Extra Credit (10 points):

Extend your assembly program to also print out the address of the matching character (i.e. the result variable) as a hexadecimal number in addition to a decimal number.
This should be the equivalent of printf("%X", result);