## **CS 211**

## LAB 5: Floating Point Operations in MIPS

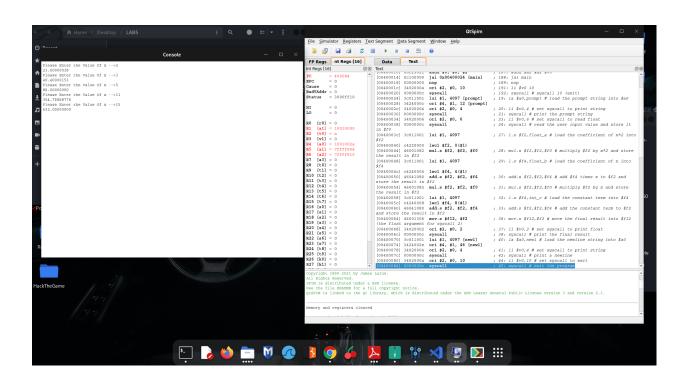
Name – Gautam Kumar Mahar Roll No. – 2103114 Branch – Computer Science Engineering

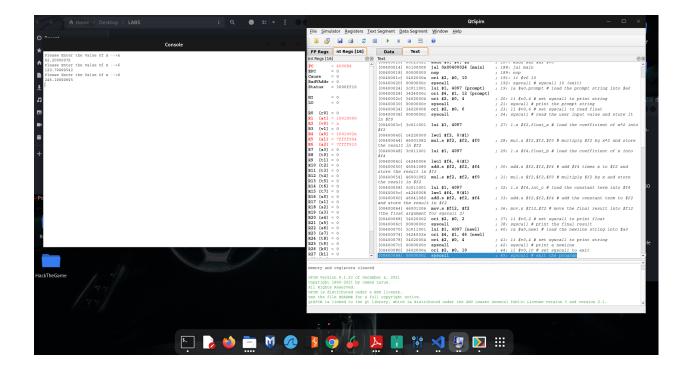
### [PART B]

Write MIPS Assembly language programs to study the working of floating point operations in the processor. Use single stepping to understand the changes in the respective registers.

a) Evaluate the expression 2.5x 2 +4.3x+5. Take x as input from the user. Display the result.

#### Output -





# b) Find the square root of a number entered by the user. Apply Newton's method to perform the

calculations (Accurate up to 5 places of decimal).

Hint: Newton's method is a way to compute the square root of a number. Say that n is the

number and that x is an approximation to the square root of n.

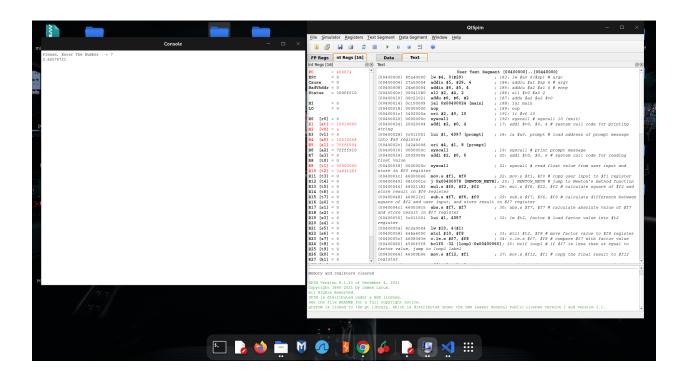
Then:

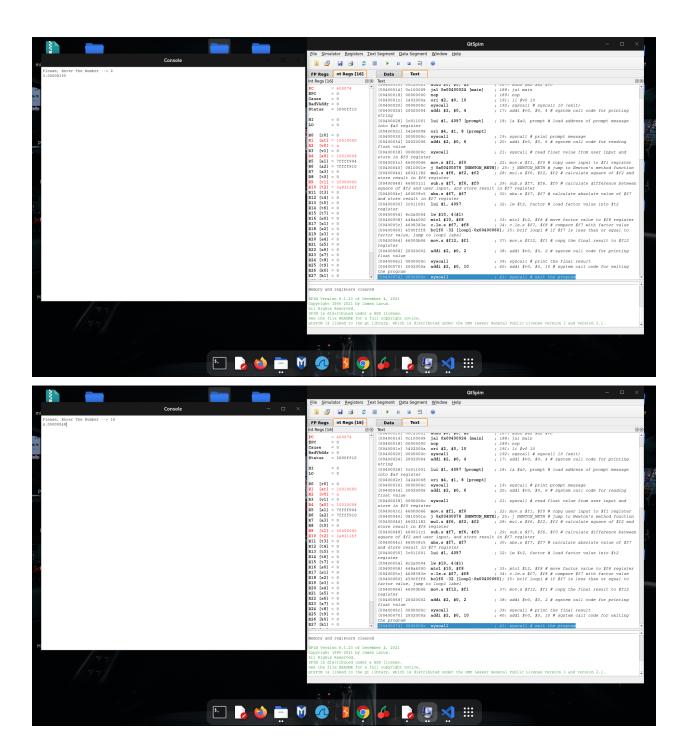
x\$#39; =(1/2)(x + n/x)

x' is an even better approximation to the square root.

If x reaches the exact value, it stays fixed at that value.

#### Output -





## **Thank You**