

COMP 300 Section B

**FORMAN CHRISTIAN COLLEGE**  
(A CHARTERED UNIVERSITY)  
**COMPUTER ORGANIZATION & ASSEMBLY LANGUAGE**  
**LAB 4**

ROLL No.

Time Allowed: 24 Hrs

This lab should be done in complete isolation. No group formation is allowed.

It's an open books and open notes lab session. You CANNOT share your code/work with each other. Any such attempt will result in a straight ZERO grade in this lab.

Use of Internet is allowed for this lab.

Both code file/s and report need to be submitted within the given time window.

Start early. No extension in time will be awarded.

**Rubric**

|                                       |     |
|---------------------------------------|-----|
| Correct Code                          | 70% |
| Proper use of indentation in the code | 5%  |
| Proper comments                       | 5%  |
| Well formatted report                 | 20% |

**Lab Task 1 [50%]**

In this lab you are required to write a program in MIPS assembly language that should do the following:  
It should prompt user to enter her name. Next it should prompt to enter her favorite course code. Finally, it should display a string shown.

A dry run of the program is as follows:

Enter your name: ***Rauf***

Enter your favorite course title: ***COMP300***

***Rauf likes COMP300***

Italic and bold part of the output shows user response.

Please make sure to replace ***Rauf*** by your name and ***CSCS323*** by your favorite course code.

**Output should appear in a single line.**

**Lab Task 2 [50%]**

Transform the following C like code into MIPS Assembly. You may use different registers to store the numeric values. Assemble your code and display the result in an appropriate way.

```
main {
```

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```
int a = 5;
int b = 2;
int c = 3;
int x = prompt("Enter a value for x: ", &x);
int y = a * x * x + b * x + c;
print("The result of quadratic equation is " y);

}
```

### Submission Format

You are required to submit following before the lab time expires.

- Logisim design file/s
- Lab Report

Logisim file/s and report should be submitted in zip format with your roll number as its name. Follow this naming convention:

<your roll number>\_COMP300B21\_<lab number>

Make sure that the report should follow the template already shared with the class.