

**Department of Computer Engineering**  
**Faculty of Engineering, University of Jaffna**  
**EC2010 – Computer Programming**  
**Lab 05**

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**Date: 12 November 2020**

**Duration: 3 Hours**

**Instructions:**

- Any plagiarized work will be given **0** marks.
  - Submit your lab work as a zip file named **LAB05\_20YYEXXX** (20YYEXXX – Your Registration Number) **on/before the given deadline** via teams.
  - The zip file should contain all “.cpp” code files and your report in pdf format.
  - Prepare your lab report with the **COMPLETE CODE** and snippets of the corresponding outputs. The code **must be** in text format not screen shots.
  - Failure to adhere to any of the above instructions may also result in zero marks.
  - The .cpp file **MUST** be named ‘Q1’, ‘Q2’, ‘Q3’ and ‘Q4’ appropriately. Do not modify these names in any manner.
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Q1) Write a Program to find the multiplication of whole numbers and multiplication of real numbers using function overloading.

**10 marks**

Q2) Write a recursive function to read a number as user input, and then displays the number in reverse order (the number will be in any digits).

**20 marks**

Q3) A teacher requests you to create a simple program to enter minimum 10 number of students’ ID number and their marks for a subject and display them in a chart.

Write an interactive C++ program to create a 2D-array to store students’ data and that will accept the ID number of a student as input and display the corresponding marks. And it should allow his/her to display the maximum marks or minimum marks when the word “**max**” or “**min**” is entered. Design the program so that it executes repeatedly, until the word “**end**” is entered as input.

**25 marks**

Q4) A reputed company request you to create a simple program to create a telephone directory to enter their clients and their Phone numbers. Consider the following details.

Name	Phone number
ABCcompany	+9149628321
Lahiru.Brothers	+9528736541
LankanPainters	+9654278156
BlockDesigner	+6345821475
Kumar&Sons	+4475986124

Write an interactive C++ program to create a 2D-array to store the clients' data and that will accept the name of a client as input and display the corresponding phone number, and vice versa. And it should allow the them to edit the phone number and client name when the word “**edit**” is entered and display the updated directory. Design the program so that it executes repeatedly, until the word “**end**” is entered as input.

35 marks