# P r o g r a m m i n g    F u n d a m e n t a l s

**Lab 05**                                                                                              **Marks 100**

## Instructions
Work on this lab individually.
You can use your books, notes, handouts etc. but you are not allowed to borrow anything from your peer student.

## Objectives
Today's lab will help you to build the understanding of input, variable, Simple calculation statements in C++.

## Submission
No submission is required.

## What you have to do
Program the following tasks in your DEVCPP and then compile and execute them. The name of your files will be according to the task given in this lab.

## Task 1                                                                                                [25]

Write a program that converts **Fahrenheit temperatures** to **Celsius temperatures**. The formula is

$$C = \frac{5}{9} (F - 32)$$

**C** is the **Celsius temperature** and **F** is the **Fahrenheit temperature**

## Task 2                                                                                                [25]
The **area of a rectangle** is the **rectangle's length times its width**. Write a program that asks for the **length and width** of **two rectangles** and show its **area**.

## Task 3                                                                                                [25]

Write a program that input student **rollNo., name, email and CGPA** from the user and display it on the console.

## Task 4                                                                                                [25]

The monthly payment on a loan may be calculated by the following formula:

$$Payment = \frac{Rate * (1 + Rate)^N}{((1 + Rate)^N - 1)} * L$$

**Rate** is the monthly interest rate, which is the annual interest rate divided by **12**. (12% annual interest would be 1 percent monthly interest.) **N** is the number of payments and **L** is the amount of the loan.

Write a program that asks for these values and displays a report similar to

Loan Amount: **10000.00**
Monthly Interest Rate: **1** (in %)
Number of Payments: **36**
Monthly Payment: **332.14**
Amount Paid Back: **11957.15**
Interest Paid: **1957.15** (The answer to 2 decimal places that must be displayed with fixed-point notation)

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## ☺ ☺ ☺ **BEST OF LUCK** ☺ ☺ ☺