Faculty of Engineering, University of Jaffna
Department of Computer Engineering
EC2010 – Computer Programming
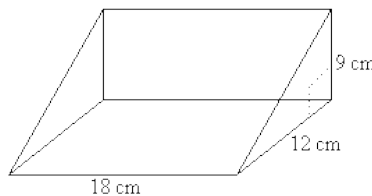# Lab 09

Date: 21/12/2020   **Duration: 3 hours**

Instructions

- Any plagiarized work will be given 0 marks.
- Submit your lab work as a zip file named ***Lab09_20YYEXXX*** *(20YYEXXX – Your Registration Number)* **on/before the given deadline** via teams.
- The zip file should contain all ".cpp" code files and your report
- The report should contain all codes in text format and outputs as screenshots.
- The cpp file **MUST** be named 'Q1', 'Q2' and 'Q3' appropriately. Do not modify these names in any manner. **Do not** even annex your index number to the file name. **Do not** change case.

Q1) Consider the two triangular prisms with different heights and same base. Define a class called "Prism". You need to remove the volume of second triangular prism from the first one to make a new triangular prism. Write a C++ program to calculate the volume of the third triangular prism which will take the substation of the parameter height of two triangular prism. Display the volume of the third prism. (Use operator overloading)

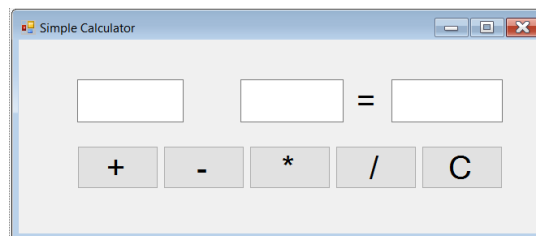Assume: The face of the triangular prism is a right angle

	Edges of triangular	Height
Triangular prism 1	9, 12	18
Triangular prism 2	9, 12	10
Third prism	9, 12	18 – 10 = 8

Q2) Write a C++ program to define a class named Distance and include meter and centimeter as private attributes. Include the member function to display it, in **m:cm** format. print the sum and difference of two distances using operator overloading .You need to check below pair of inputs

    A. 6m 10cm, 3m 35cm
    B. 8m 90cm, 5m 40cm
    C. 7m 15cm, 4m 60cm

```
--First distance--
Enter the meter:
7
Enter the centimeter:
15
--Second distance=--
Enter the meter:
4
Enter the centimeter:
60
Total Distance:
11 meter and 75 centimeter

Difference between both distances:
2 meter and 55 centimeter
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Q3) Create a UI for a simple calculator. The sample UI is given below

After entering two numbers in the first two boxes and pressing an operator the results should appear as follows. Here "C" button is to clear all the text boxes. You need to attached the solutions for this with the screenshots in your report