CL-1002
Programming Fundamentals - Lab
Lab # 6

Objectives:

- Introduction to Visual Studio 2015.
- Basic Input/output
- Basic Arithmetic Operators
- Operators Precedence
- Conditional statements.
- Practice tasks

Note: Carefully read the following instructions (*Each instruction contains a weightage*)

1. Use proper **font family** and **font size** of **heading**, **sub heading** and **normal text**.
2. First think about statement problem then write/draw your logic on copy.
3. Attach the screen shots of your code in word file with execution (cpp project).
4. File (Word) tittle should in proper format (**23F-1001-Lab2**)
5. You have to submit both (**word + Project zip**) files.
6. **Upload separate word file and archive of your project.**
7. Do not copy from any source otherwise you will be penalized with negative marks.
8. Complete your lab **within given Time Slot**.

Find the OUTPUT of the following code.

```
#include <iostream>
using namespace std;

int main() {

int a;
cout<<”Enter an integer:”;
cin>>a;
if (a > 0)
       {
       cout<<”Positive Number”;
       }

system(“pause”);
return 0;
}
```

Problem: Write C++ code for the following statements

1. **Write a C++ code that take year from user and check whether year is leap or not.**

   (Marks 02)

2. **Write a C++ code that take a day number in integer and display the day name in the word (0-Monday, 1-Tuesday, 2-Wednesday, 3-Thursday, 4-Friday, 5-Saturday, 6-Sunday), if user enters 3 then output will Thursday.** **(Marks 02)**

3. **Write a C++ code that a character and check whether it is similar to the first character of your name or not** **(Marks 02)**

   Sample: Input m. Yes, its match from "Muiz" first letter.

4. **Write a C++ code that take Grade from user and show his performance:** **(Marks 02)**

Grade	Performance
A	Excellent
B	Very Good
C	Good
D	Average
F	Try Again

5. **Write a C++ code that take three integers from user and check whether these are equal or not (i.e. a=16, b=16, c=16 –> output: Numbers are Equal)** **(Marks 02)**

6. **Write a program that prompts the user to input three numbers. The program should then output the numbers in ascending order.** **(Marks 05)**

7. **Write a C++ program that accept a coordinate point in a XY coordinate system and determines quadrant the coordinates lie:** **(Marks 05)**

   (X+1,Y+1 -> 1st Quadrant,

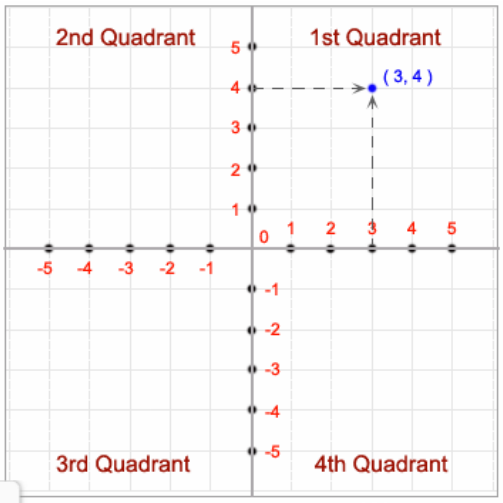
   X-1,Y+1 -> 2nd Quadrant,

   X-1,Y-1 -> 3rd Quadrant,

   X+1,Y-1 -> 4th Quadrant

   X=0,Y=0 -> Origin)

   i.e., Input (x=3, y=4 then it is in first Quadrant)



8. **Write a C++ program to check whether a triangle is Equilateral, Isosceles or Scalene**. (If none of the sides of a triangle are equal (of equal length), the triangle is scalene. If two or more of the triangles' sides are equal, the triangle is isosceles. If all three of the sides of a triangle are equal, it is equilateral) **(Marks 05)**

Best of Luck ☺

"A person who never made a mistake never tried anything new" – Albert Einstein