CL-1002
Programming Fundamentals
Lab # 15

Objectives:
- Practice and understanding of C++ programs
- Control Structure(repetition)
- 1D & 2D Arrays
- Pointers
- File handling

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

1. Use proper **font family (Times New Roman)** and **font size** of **heading (Bold 14), subheading (Bold 12),** and **normal text (12)**.
2. First think about statement problems and write your program in C++ on Microsoft Visual Studio. Programs made with any other software will **NOT** be accepted.
3. Do not copy from any source otherwise you will be penalized with negative marks.
4. For each task in the manual, create a new C++ program with the naming convention as follows: **TASK-NO.**
5. Mention what is happening in each line of code using **comments**.
6. Write all codes one by one with proper numbering and paste a screenshot of each problem using the snipping tool (default screen capture software in Windows) on a Microsoft Word file.
7. Name your file (**24F1234_lab16**) and submit it on **Google Classroom**.
8. Submissions turned in after the deadline will be accepted; however, a penalty of 50% will be deducted from the total score.

1. Write a program that creates a text file named firstfile.txt. Now open this file and write the following sentences in the file "My name is……. I am a student of BS CS 1ˢᵗ semester. My roll number is …….. I am taking the course of PF. This is my first created file". Now close the file.

2. Write a program that opens an already created file firstfile.txt (that you have created in the first question). Now read the data of the file and display it. (Read the data until you reach the end of file). Now remove all the text from the file.

3. Write a program to add two numbers.

    a. Write a C++ program that creates a file.

    b. Ask the user to input two numbers

    c. Take their sum and store in variable.

    d. Write both numbers and their sum in file.

    e. Now read it from the file and display.

4. Write a program that asks the user to enter integers as inputs to be stored in the variables 'a' and 'b' respectively. There are also two integer pointers named ptrA and ptrB. Assign the values of 'a' and 'b' to ptrA and ptrB respectively, and display them.

5. Write a program to store n elements in an array and print the elements using a pointer.

   Test Data :

   Input the number of elements to store in the array :5

   Input 5 number of elements in the array :

   element - 0 : 5

   element - 1 : 7

   element - 2 : 2

   element - 3 : 9

   element - 4 : 8

   Expected Output :

   The elements you entered are :

   element - 0 : 5

element - 1 : 7

element - 2 : 2

element - 3 : 9

element - 4 : 8

6. Write a program in C++ to swap elements using call by reference.

Best of luck ☺
When you are done with your exercise, submit it on slate/classroom at the given time.