Object Oriented Programing (CL-1004)

Lab 01

Deadline: Saturday, February 05, 2022 (02:00 PM After noon)
(Submit on Google Classroom)

Points: 80

Instructions:

1. Solve each problem in separate file, Name the code file with problem no (Task_01, Task_02,.)
2. Copy these files (Task_01, Task_02,.) in a folder and name the folder like that K21XXXX. where XXXX is your 4-digit Student Id.
3. Now compress that folder and submit on google-classroom.
4. Do not attach .exe file, otherwise it will show a threat or virus and not allow me to download.
5. Make sure you must Press the Turn-In button after uploading the solution folder. Otherwise, it will not be submitted.

Task_01:

Write a program that reads the input from user and store into the variable of all primitive datatypes (int, char, float, bool) using **cin** and **cout** stream operators.

Also, in comments of the solution file states the difference between primitive and derived datatypes

Task_02:

Write a program which can store 5 students' marks for only one subject as input then finds the highest mark among the students and the difference of the other students marks from the highest one as well.

Task_03:

Write a program for allowing three students with number of leave in a semester. The number of leaves depends on your choice but must be different in numbers. Your program should allow you to increase 5 more leaves to each student.

Task_04:

Declare the variables of primitive datatype (int, char, float, bool). Now take input into these variables using pointer of that specific types. In the end print the values of these variables using pointers

Task_05:

you appeared for entry test at FAST-NU. Your test contains an IQ based part in
which you IQ level is tested with following formula.
Iq_Score = 2 + (A + 0.5p).
You are required to write a program which generate a table for value of Iq_Score, A and p, where the values of variable A varies within range(1-to-10) and for each value of A, p value varies within range (5.5-to-14.5) in steps of 0.56.

Task_06:

The converse of the famous Pythagoras Theorem is if a triangle has sides of length x, y and z, and if:

$x^2 + y^2 = z^2$, then the triangle is right

$x^2 + y^2 > z^2$, then the triangle is obtuse

$x^2 + y^2 < z^2$, the triangle is acute

Write a program that uses an array of pointers to read the lengths of x, y, and z sides and determine the type of the triangle. The program should force the user to enter a value for z greater than the other two.

Task_07:

You need to declare an array of 5 x 9 elements. In which first 1st column contains the StudentID and its respective 5 courses obtained marks in following 5 five columns for the semester. In rest of 4 columns total marks, obtained marks, and Percentage as shown in given table.

- Use pointer, to initialize the array with its default value.
- Use pointer, to take user input for the first 6 columns.
- Use pointer, to calculate the Total marks, obtained marks, and Percentage columns will be filled by your program on the basis of required logic for each of the columns.

Std-id	C1-Marks	C2-Marks	C3-Marks	C4-Marks	C5-Marks	Total-marks	Obt-marks	percentage
1								
2								
3								
4								
5								

Task_08:

You are working part time job along with your three friends after university time. All of you sell six different products per day. At end of duty time each of you submit a report which contains the information like employee id of each of you, the id of the product which you sold and the total amount for the products which you have sold. After one month of your job your reporting officer wants you to you write a program which read the report at end of the month and summarize the total sale made by each employee for each product. Your program should display the processed information in the form of table where each row will represent the respective product and each column will be the representation for each employee. Your program should also print the total product sale and the total sale by particular employee.

Happy Coding ☺