CL-1004 OBJECT ORIENTED PROGRAMMING LAB

Assignment # 01

INSTRUCTOR: HURMAT HIDAYAT

SEMESTER SPRING, 2022

ASSIGNMENT #01
Object Oriented Programming – Lab

Due Date: 14th May 2022

Total Marks: 20

Submit the assignment on **Google Classroom and printed form**. Do not email me assignments after due date. It will not be accepted in any case. Students are required to submit actual content written in Pdf. Hand written/ Scanned assignments will not be accepted.

Note: Name of the file should start with your Serial Number followed by Roll number, Name and at the end assignment number (**10_p190001_Name_Assign#01)**

Q No.1: Write a C++ program to find leap year using if else statement. Leap year Hints: common year has 365 days (feb 28 days). Leap year has 366 days (feb 29 days). year%4==0 leap year.

Q No.2: Write a C++ program using switch statement which get month number from user and display month name accordingly.

Q No.3: Write a C++ program that will create 2D array using random numbers and then show these values.

Q No.4: Write user defined function namely *arrayFunction()* in C++ which will initialize array by taking values from user at run time and then call this function in main function which will return this array from the calling function to the called function (to the main function) and then show all items of this array in main function using both for loop.

Q No.5: Game of Random Number

Generate random number from 0 to 100 and after generating random number show this message to user **"Number generated, try to guess it**". Take any number from user using cin statement by showing message "**Enter your guess number:**" _for guessing. Compare this guess number to the

randomly generated number. If this guess number is greater than randomly generated then show message like "**Your number is high, please try again**" _and if this guess number is less than randomly generated number then show message i.e. "**Your number is low, please try again**". Continue this process using while or do while loop until you find random number. After finding random number show this message "**You found random number in count attempts**". Initialize count variable to count number of attempts/tries for finding a number. If the count value is less than or equal to 5 then show "Excellent" message else show "Good" message to the user.

Q No.6: Write a program to find out the length of string by using pointers?

(**Take string value from user at runtime**)

Q No.7: Create a structure called Volume that uses three variables of type Distance to model the volume of a room. Initialize a variable of type Volume to specific dimensions, then calculate the volume it represents, and print out the result. To calculate the volume, convert each dimension from a Distance variable to a variable of type float representing feet and fractions of a foot, and then multiply the resulting three numbers.

Q No.8: Define a class batsman with the following specifications:

Note for user understanding purposes you should write comment with each line of code.

Private members:

bcode	4 digits code number
bname	20 characters
innings, not out, runs	integer type
batAvg	it is calculated according to the formula – batavg =runs/(innings-notout)
calcavg()	Function to compute batavg

Public members:

readdata()	Function to accept value from bcode, name, innings, notout and invoke the function calcavg()
displaydata()	Function to display the data members on the screen