



CL-1002

Programming Fundamentals

Lab # 9

Objectives:

- Practice and understanding on basic c++ programs
- If statement
- If else statement
- If else-if else statement
- Loops
- For Loops
- While Loops

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

1. First think about statement problems and then write your program.
2. Write Program in C compiler/IDE and save source file **for each program**.
3. *Do not copy from any source otherwise you will be penalized with negative marks.*
4. Complete your lab **within given Time Slot**.
5. Add your source code in this word document + Make one ZIP file of your all source codes.
6. Please submit your **Both files** with this naming convention ROLLNO_SECTION_LABNO.
7. Submit your lab on Google Classroom.

Problem: 1 (Loops)

(Marks = 3)

Write a program that prints all the odd numbers in the range [min - max].

Note: Where 'min' and 'max' are integers variables taken from the user.

Problem: 2 (Loops - if)

(Marks = 3)

Write a program that takes 10 numbers as inputs from user in 1 variables. Finally, prints the maximum of all those numbers.

Note: You must take the inputs in a loop.



Problem: 3 (Loops and running average)

(Marks = 3)

Write a program that takes 10 numbers as inputs from user. Finally, prints the Average of all those numbers.

Note: You must take the inputs in a loop. You can use a maximum of two variables.

Problem: 4 (Sentinel Loops)

(Marks = 3)

Write a computer program that prints the table of a number taken input by the user.

Problem: 5 (Loops)

(Marks = 3)

Write a computer program that takes a number as input and prints its factorial on the screen.

Problem: 6 (Reverse Loop)

(Marks = 3)

Write a program that takes two numbers as input from the user, and prints all even numbers smaller than that number in descending order.

Problem: 7 (For Loops)

(Marks = 3)

Write a program to print the first n-terms of a Fibonacci sequence where 'n' is taken as input by the user. A Fibonacci sequence is a sequence whose every term is the sum of its previous two terms.

Sample Input: 8

Sample Output: 0, 1, 1, 2, 3, 5, 8, 13

Problem: 8 (Logic + Loops)

(Marks = 5)

Write a program to develop a guessing number game. In this game, a secret is taken by the user in a variable called "**secret_no**". User is asked to guess the secret number repeatedly unless user guesses right. User input is taken in variable called "**guess_no**". If user guesses wrong, user is given one of the advices "Guess a bigger number" and "Guess a smaller number". If user guesses the number right, system should show "You have won" and print the number of guesses the player took.

Hint: User guesses are taken input in a loop.
