LAB 2

REVISIT

**Note: Write all the programs in C/C++ using function concept.**

1. WAP to generate a Fibonacci series up to n terms.

**Input**

Input number of terms: 10

**Output**

Fibonacci series:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34

1. WAP to find out series sum of 1^2 + 2^2 + …. + n^2
2. WAP to find out GCD of two numbers.
3. WAP to multiply two numbers by using addition.
4. WAP to convert a binary number into decimal.
5. WAP to convert a decimal into binary number.
6. WAP to display lower triangular matrix of a given n by n size matrix entered by user.
7. WAP to find out nCr factor of given numbers.

Note: nCr = n! /((n-r)!r!)

**Advanced Problems:**

1. WAP for finding the element which appears maximum number of times in the array.
2. Consider that you are given with a database of employee records (at least 5). Each employee record having following information –

Emp\_id(integer) Emp\_name(string) Emp\_city(string)

Assume that Emp\_id is unique. Write a function for taking database and put it in your header file. Use this function by including your own header file for following questions.

**{Use the structure for creating database}**

1. Write a function to find out the employee record from this database on the basis of Emp\_id.
2. Write a function to sort the employee records on the basis of Emp\_id.
3. Write a function to sort (alphabetically) the array of characters.
4. Write a function to count the number of employees in database.
5. Write a function to add 5 more records in database.