

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

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

Note: ${}^nC_r = n! / ((n-r)!r!)$

Advanced Problems:

9. WAP for finding the element which appears maximum number of times in the array.
10. 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}

- a. Write a function to find out the employee record from this database on the basis of Emp_id.
- b. Write a function to sort the employee records on the basis of Emp_id.
- c. Write a function to sort (alphabetically) the array of characters.
- d. Write a function to count the number of employees in database.
- e. Write a function to add 5 more records in database.