Day 15

Lab Assignments

1. WAP to add two numbers entered through the keyboard by using a suitable user defined function.
   Input: Enter two numbers: 17 13
   Output: Sum of 17 and 13 = 30
2. WAP to find the factorial of a number by using a suitable user defined function.
   Input: Enter a number: 5
   Output: Factorial of 5 = 120
3. A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are found by adding the preceding two terms in the sequence ($F_i = F_{i-1} + F_{i-2}$). WAP to find out the value of n^{th} term of the Fibonacci sequence by writing a suitable user defined function.
   Input: Enter the value of n: 8
   Output: 8th term of the Fibonacci Sequence is 13
4. Write a C program to determine a number is prime or not using a function named as "isPrime".
   Input 1: Enter a number: 11
   Output 1: 11 is a prime number.
   Input 2: Enter a number 30
   Output 2: 30 is not a prime number.
5. Write a C program to perform swapping of two integers using a function SWAP.
   Input: Enter two numbers: 5 7
   Output: Before swapping the two numbers are: n1 = 5 and n2 = 7
   After swapping the two numbers are: n1 = 7 and n2 = 5
6. WAP to calculate the sum of the digits of any given integer by designing a function.
   Input: Enter a number: 345
   Output: Sum of the digits of 345 = 12

Home Assignments

1. WAP to test whether a number entered through the keyboard is a number in the Fibonacci sequence or not.
   Input 1: Enter a number: 45
   Output 1: Entered number 45 is not in the Fibonacci Sequence.
   Input 2: Enter a number: 21
   Output 2: Entered number 21 is in the Fibonacci Sequence.
2. WAP by designing a function to calculate the sum of the digits of any given integer until it becomes a single digit number.
   Input: Enter a number: 34598
   Output: Sum of the digits of 34598 = 2
3. WAP to test whether a number n is palindrome number or not.
   Input 1: Enter a number: 1221
   Output 1: 1221 is a palindrome number.
   Input 2: Enter a number: 121
   Output 2: 121 is not a palindrome number.
4. Write a function that will return the number of zeros present in a positive

integer.

Input 1: Enter a number: 12010

Output 1: Number of zeros in the number 12010 = 2

5. WAP to calculate GCD/HCF of two numbers by using an iterative function for GCD.

   Input: Enter two numbers: 20 45

   Output: GCD of 20 and 45 = 5

6. WAP to find out n_{C_r} by using a user defined function. This function should use another user defined function to find the factorial.

   Input: Enter the value of n: 10
   Enter the value of r: 2

   Output: 10 C 3 = 120