



Practicing Recursive Programs - I

1. Write a program in C to print the first 50 natural numbers using recursion.

Expected Output:

The natural numbers are : 1 2 3

4 5 6 7 8 9 10 11 12 13

14 15 16 17 18 19 20 21

22 23 24 25 26 27 28 29 30

31 32 33 34 35 36 37 38

39 40 41 42 43 44 45 46 47 48 49 50

2. Write a program in C to calculate the sum of numbers from 1 to n using recursion.

Test Data:

Input the last number of the range starting from 1 : 5

Expected Output:

The sum of numbers from 1 to 5:

15

3. Write a program in C to Print Fibonacci Series using recursion.

Test Data :

Input number of terms for the Series (< 20) : 10

Expected Output:

Input number of terms for the Series (< 20) : 10



The Series are :

1 1 2 3 5 8 13 21 34 55

4. Write a program in C to print the array elements using recursion.

Test Data :

Input the number of elements to be stored in the array :6

Input 6 elements in the array :

element - 0 : 2

element - 1 : 4

element - 2 : 6

element - 3 : 8

element - 4 : 10

element - 5 : 12

Expected Output :

The elements in the array are : 2 4 6 8 10 12

5. Write a program in C to count the digits of a given number using recursion.

Test Data :

Input a number: 50

Expected Output :

The number of digits in the number is: 2

6. Write a program in C to find the sum of digits of a number using recursion.

Test Data:

Input any number to find the sum of digits: 25



Expected Output:

The Sum of digits of 25 = 7

7. Write a program in C to find the GCD of two numbers using recursion.

Test Data :

Input 1st number: 10

Input 2nd number: 50

Expected Output :

The GCD of 10 and 50 is: 10

8. Write a program in C to get the largest element of an array using recursion.

Test Data :

Input the number of elements to be stored in the array :5

Input 5 elements in the array :

element - 0 : 5

element - 1 : 10

element - 2 : 15

element - 3 : 20

element - 4 : 25

Expected Output :

Largest element of an array is: 25

9. Write a program in C to reverse a string using recursion.

Test Data :

Input any string: w3resource

Expected Output:



hitbullseye

The reversed string is: ecruser3w

10. Write a program in C to find the Factorial of a number using recursion.

Test Data:

Input a number: 5

Expected Output:

The Factorial of 5 is: 120