CSA02 C Programming -Cycle-2

1. Write a program to print the following pattern. Get the number of rows from the user.

   Sample input:

   Number of Rows: 5

   Sample output:

   ```
          1
   2  1
   3  2  1
   4  3  2  1
   5  4  3  2  1
   ```

2. Write a program in C to get the largest element of an array using the function.

   Test Data :

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

   Input 5 elements in the array :

   element - 0 : 1

   element - 1 : 2

   element - 2 : 3

   element - 3 : 4

   element - 4 : 5

   Expected Output :

The largest element in the array is : 5

3. Write a program to find the number of composite numbers in an array of elements
   Sample Input;:
   Array of elements = {16, 18, 27, 16, 23, 21, 19}
   Sample Output:
   Number of Composite Numbers = 5
   Test cases:
   1.Array of elements = {26, 28, 37, 26, 33, 31, 29}
   2. Array of elements = {1.6, 1.8, 2.7, 1.6, 2.3, 2.1, .19}
   3. Array of elements = {0, 160, 180, 270, 160, 230, 210, 190, 0}
   4. Array of elements = {200, 180, 180, 270, 270, 270, 190, 200}
   5. Array of elements = {100, 100, 100, 100, 100, 100, 100, 100}

4. Write a program in C to Calculate the length of the string using a pointer

   Test Data :

   Input a string : SAVEETHA

   Expected Output :
   The length of the given string saveethais : 8

5. Write a program in C to add numbers using call by reference

   Test Data :

   Input the first number : 5

   Input the second number : 6

   Expected Output :
   The sum of 5 and 6 is 11
   Test cases:

6. Write a Program to display the diagonal elements in a matrix array and also find the sum of them.
   Sample input:
   1 2 3
   4 5 6
   7 8 9
   Output:
   Diagonal Elements are 1 5 9
   Sum of diagonal elements = 15

7. Write a program in C to find the factorial of a given number using pointers.

    Test Data :

   Input a number : 5

   Expected Output :
   The Factorial of 5 is : 120

8. Write a program in C to compute the sum of all elements in an array using pointers.

   Test Data :

   Input the number of elements to store in the array (max 10) : 5

   Input 5 number of elements in the array :

   element - 1 : 2

   element - 2 : 3

   element - 3 : 4

   element - 4 : 5

   element - 5 : 6

   Expected Output :
   The sum of array is : 20