Assignment No 8 and 9

Programs to show different types of iteration / loop.
Implementation of iterative problems e.g., sum of series.

1) Write a program in C to display the first 10 natural numbers.

2) Write a program in C to display n terms of natural number and their sum.

3) Write a program in C to read 10 numbers from keyboard and find their sum and average.

4) Write a program in C to display the cube of the number upto given an integer.

5) Write a program in C to display the multipliaction table vertically from 1 to n. Test Data :
Input upto the table number starting from 1 : 8
Expected Output :
Multiplication table from 1 to 8
1x1 = 1, 2x1 = 2, 3x1 = 3, 4x1 = 4, 5x1 = 5, 6x1 = 6, 7x1 = 7, 8x1 = 8
...
1x10 = 10, 2x10 = 20, 3x10 = 30, 4x10 = 40, 5x10 = 50, 6x10 = 60, 7x10 = 70, 8x10 = 80

6)Write a program in C to display the pattern like right angle triangle using an asterisk. The pattern like :

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*
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***
****
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7) Write a program in C to make such a pattern like right angle triangle with number increased by 1.

The pattern like :

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1
2 3
4 5 6
7 8 9 10
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8) Write a program in C to display the n terms of even natural number and their sum.

Test Data :
Input number of terms : 5
Expected Output :
The even numbers are :2 4 6 8 10
The Sum of even Natural Number upto 5 terms : 30

9) Write a program in C to print the Floyd's Triangle.

10) Write a program in C to find the sum of the series 1 +11 + 111 + 1111 + .. n terms.

11) Write a C program to check whether a given number is an armstrong number or not.

12) Write a program in C to find the prime numbers within a range of numbers.

13) Write a program in C to check whether a number is a palindrome or not.

14) Write a program in C to convert a decimal number into binary without using an array.

Test Data :
Input a decimal number: 25
Binary number equivalent to said decimal number is:
00000000000000000000000000001 1001

15) Write a program in c to find the Sum of GP series.

Test Data :
Input the first number of the G.P. series: 3
Input the number or terms in the G.P. series: 5
Input the common ratio of G.P. series: 2
Expected Output :
The numbers for the G.P. series:
3.000000 6.000000 12.000000 24.000000 48.000000
The Sum of the G.P. series : 93.000000

16) Write a program in C to Check Whether a Number can be Express as Sum of Two Prime Numbers.

17) Write a program in C to convert a decimal number to hexadecimal
Test Data :
Input any Decimal number: 79
Expected Output :
The equivalent Hexadecimal Number : 4F