

## Assignment on Loops :

- Write a C program which will scan integer number int limit from the user and print the series of the number from 1 to limit using the for loop.
- Write a C program which will scan integer number int limit from the user and print the series in reverse number from limit to 1 , using the for loop.
- Write a C program which will scan integer number int limit from the user and print the addition of the series from 1 to limit using the for loop.
- Write a C program which will print the A to Z using the for loop.
- Write a C program which will scan integer number int limit from the user and print sum of the even number and sum of odd numbers in the series from 1 to limit using the for loop.
- Write a C program which will scan two integer numbers int x , int n from the user and calculate the nth root of the number x Where ,nth root means calculating the x raised to the power of n i.e., if x should be multiplied with x by n times. For example : int x = 2 and n = 4 then , the answer is equal to  $2 \times 2 \times 2 \times 2 = 16$ . Calculate the Exponential of the number x and display the result.
- Write a C program which will scan one integer number n ( int n ) from the user and print the table of that number using a for loop.

Write a C program which will print the multiplication table using a for loop.

Output should look similar to this :

1.  $1 * 1 = 1$  ,  $2 * 1 = 2$  .....  $10 * 1 = 10$ .
2.  $1 * 2 = 2$  ,  $2 * 2 = 4$  .....  $10 * 2 = 20$ .
3. ....
4. ....
5.  $1 * 10 = 1$  ,  $2 * 10 = 20$  .....  $10 * 10 = 100$ .

- Write a C program to calculate the factorial of a given number N using a for loop.

### Requirements:

- **Input:** An integer N (e.g., N = 4).
- **Output:** The factorial of N (e.g., for N = 4, the output should be 24 because  $4! = 4 * 3 * 2 * 1 = 24$ ).