

### **SHEET :-3 Control Statement (Loops)**

1. Write a program that takes a positive integer N as input from the user and prints all natural numbers from 1 to N, with each number followed by a space.

**Input:-** N = 5

**Output:-** 1 2 3 4 5

2. Write a program to print all Natural numbers from N to 1 where you have to take N as input from user.

**Input:-** N = 5

**Output:-** 5 4 3 2 1

3. Write a program to print all even numbers from 1 to N where you have to take N as input from the user.

**Input:-** N = 10

**Output:-** 2 4 6 8 10

4. Write a program to print all odd numbers from 1 to N where you have to take N as input from user.

**Input:-** N = 10

**Output:-** 1 3 5 7 9

5. Write a program to find sum all Natural numbers from 1 to N where you have to take N as input from user

**Input:-** N = 10

**Output:-** 55

6. You are given an integer A, you need to find and return the sum of all the even numbers between 1 and A. Even numbers are those numbers that are divisible by 2.

**Input:-** A = 5

**Output:-** 6

**Explanation:-** Even numbers between [1, 5] are (2, 4).

7. Take an integer A as input. You have to print the sum of all odd numbers in the range [1, A].

**Input:-** A = 4

**Output:-** 4

**Explanation:-** For A = 4, Odd numbers 1 and 3 lie in the range [1, 4]. Sum = 1 + 3 = 4.

**8.**Take integer N as input and Print the count of digits of that number.

**Input:-** N = 10101

**Output:-** 5

**Explanation:-** 10101 has 5 digits

**9.** Take integers N as input. Your task is to calculate and print the sum of the digits of the given number N.

**Input:-** N = 1589

**Output:-** 23

**Explanation:-** For the number 1589, the digits are 1,5,8,9. The Sum(1589) = 1+5+8+9 = 23.

**10.**You are given an integer A as input and you need to determine whether it is a palindrome or not.A palindrome integer is one whose digits, when reversed, result in the same number.

For example, 121 is a palindrome because its reverse is also 121, but 123 is not a palindrome because its reverse is 321.Note: The given integer will not have any leading zeros.

**Input:-** A = 131

**Output:-** Yes

**Explanation:-** For A = 131, reverse(A) = reverse(131) = 131, which is same as A.

**11.**Take a number A as input, print its multiplication table having the first 10 multiples.

**Input:-**

3

**Output:-**

3 \* 1 = 3

3 \* 2 = 6

3 \* 3 = 9

3 \* 4 = 12

3 \* 5 = 15

3 \* 6 = 18

3 \* 7 = 21

3 \* 8 = 24

3 \* 9 = 27

3 \* 10 = 30

**12.**You are given two integers A and B. You have to find the value of  $A^B$ .

**Input:-** A = 2 , B = 3

**Output:-** 8

**Explanation:-** For A=2 and B=3, the value of  $2^3 = 2 * 2 * 2 = 8$ .