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