While loop Assignments (Basic Level)

1) Write a program to read n numbers from the keyboard and find their sum.

Example:

Enter n number: 3
Enter 3 numbers:
10
20
10
Sum: 40

2) Write a program to read a number n, and print sum of all the numbers from 1 to n.

Example:
Enter n number: 3
Sum of all numbers from 1 to 3 is 6

3) Write a program to read a number n and print the factorial of n.

Example:
Enter n number: 4
Factorial of 4 is 24

4) Write a program to print the value of below series:

Example:
Enter n number: 3
1 - 1/2 + 1/3

Generic formula: 1 - 1/2 + 1/3 - 1/4 .... + 1/n etc

5) Write a program to multiply two numbers without using * operator,

Example:

Enter two numbers:
5
3
Result is 15.

6) Write a program to find the power of a number to the given number.

eg.,input : 3 5
output: 3 to the power of 5 -> 243 ***Write the following programs, using while loop, with counting based logic :***

1) Read n number of numbers from user (n value taken as input) and print if each number is even or odd.

Example:

Enter n number: 2
Enter x value: 5
The given number 5 is ODD.
Enter x value: 4
The given number 4 is EVEN.

2) Read n characters from user, and print if each character is vowel or not.

Example:

Enter n characters: 2
Enter a character: b
The given character 'b' is not a vowel.
Enter a character: i
The given character 'i' is a vowel.

3) Read n characters from user and print if each character is a capital alphabet, small alphabet, numeric character or special character.

Example:

Enter n characters: 3
Enter a character: b
The given character 'b' is a small alphabet.
Enter a character: ?
The given character '? ' is a special character.
Enter a character: B
The Giiven character 'B ' is a Capital alphabet.

4) Read n numbers from the user, and while reading every number, print if the number is bigger or smaller than the previous number. For the first number, there won't be any output as it is the first one.

Example:

Enter n number: 3
5
6
The given number is bigger than the previous number.
2
The given number is smaller than the previous number.

5) Read n numbers in ascending order. If a number entered is bigger than the previous number, then count it. If it is smaller, then don't count it, instead let the loop repeat itself and read another number.

Example:

Enter n number: 5

Enter 5 numbers:

3

4

2

6

8

The count is 3

6) Read n numbers from the user ,and print the smallest number of all.

Example:

Enter n number: 5

Enter 5 numbers:

3

4

2

6

8

The smallest number is 2.

7) Read a number from the user, and print its multiplication table upto 10 multiples.

Example:

Enter n number: 2

Enter x number: 2

*2*1 =2*

*2*2 =4*

*2*3 =6*

*2*4 =8*

*2*5 =10*

*2*6 =12*

*2*7 =14*

*2*8 =16*

*2*9 =18*

*2*10 =20*

Enter x number: 5

*5*1 =5*

*5*2 =10*

*5*3 =15*

*5*4 =20*
*5*5 =25*
*5*6 =30*
*5*7 =35*
*5*8 =40*
*5*9 =45*
*5*10 =50*

8) For n students from a class, read 6 subject marks for every student, and calculate their percentage of marks, and print who is the topper of all (print the student number).

Example:
Enter n students: 2
Enter 1st student 6 subjects marks:
40
50
45
75
60
55
Student 1 percentage is: 54.16%
Enter 2nd student 6 subjects marks:
45
65
55
80
40
55
Student 2 percentage is: 56.66%
Topper student ID is 2

9) Read two numbers from the user, and print all serial numbers between those numbers.
eg., inputs: 10 20
output: 10 11 12 13 14 15 16 17 18 19 20

*10) write the calculator program to read two numbers and one character (+, -, *, / , %) from the user, and based on character, do appropriate operations on numbers and print the output. Modify the program to repeat this task n number of times.*

Example:
Enter n number: 2
Enter two numbers:

5
4
Enter a character (+,-,,/,%):*
+
Result of 5 + 4 is 9
Enter two numbers:
4
3
Enter a character (+,-,,/,%):*
-
Result of 4 - 3 is 1

11) Read two numbers from the user, and print all odd numbers between those numbers and then all even numbers.

eg., inputs: 10 20
output:
even numbers: 10 12 14 16 18 20
odd numbers: 11 13 15 17 19

12) Read two numbers from the user, and print all numbers in reverse order.

eg., inputs: 10 20
output:
20 19 18 17 16 15 14 13 12 11 10