DATE:7.01.2023 EXPERIMENT 4

I. Number series

**WRITE A PROGRAM TO FIND THE SUM OF SERIES 1+3+5+7++N**

PROGRAMS:

n=int(input("Enter the maximum value:"))

oddtotal=0

number=1

while number<=n:

if(number%2!=0):

print("{0}".format(number))

oddtotal=oddtotal+number

number=number+1

print("The sum of odd numbers from 1 to {0}={1}".format(n,oddtotal))

OUTPUT:

Enter the maximum value:20

1

3

5

7

9

11

13

15

17

19

The sum of odd numbers from 1 to 20=100

**WRITE A PROGRAM TO FIND THE SUM OF SERIES 1+2+3+4+..+N**

**PROGRAM**

n=int(input("Enter the maximum value:"))

total=0

value=1

while value<=n:

total=total+value

value=value+1

print("The sum from 1to{0}={1}".format(n,total))

**OUTPUT:**

Enter the maximum value:12

The sum from 1to12=78

II.Number Pyramid - Alternate numbers pattern using while loop  
Let’s see how to use the while loop to print the number pattern.  
Pattern: –

**PROGRAM**

n=5

x=1

for i in range(1,6):

for j in range(i):

print(x,end=" ")

x+=2

print()

**OUTPUT:**

1

3 3

5 5 5

7 7 7 7

9 9 9 9 9

III. Pyramid Pattern - Equilateral triangle pattern of star  
Pattern: –

num\_rows = int(input("Enter the number of rows"));

for i in range(0, num\_rows):

for j in range(0, num\_rows-i-1):

print(end=" ")

for j in range(0, i+1):

print("\*", end=" ")

print()

OUTPUT:

Enter the number of rows4

\*

\* \*

\* \* \*

\* \* \* \*

IV. Print all the prime numbers from 1 -50

n=1

while(n<=50):

count=0

i=2

while(i<=n//2):

if(n%i==0):

count=count+1

break

i=i+1

if(count==0 and n!=1):

print("%d"%n,end=" ")

n=n+1

OUTPUT:

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47