# **Expt.no:4 PROBLEMS ON CONTROL STATEMENTS**

# **11.01.2023**

I.NUMBER SERIES

a)Write program for 2+4+……+n

PROGRAM:

n = int (input ('Enter the range of numbers:'))

sum=0

i=0

while(i<=n):

sum=sum+i

i=i+2

print('The sum of the series is :',sum)

OUTPUT:

Enter the range of numbers:6

The sum of the series is : 12

b)Write program for 1+11+111+1111+………..+n

PROGRAM:

n=int(input(“Enter the range of number:”))

sum=0

j=1

for i in range(1,n+1):

sum=sum+j

j=(j\*10)+1

print(sum)

OUTPUT:

Enter the range of number:4

1234

II. Number Patterns - Inverted pyramid pattern of numbers

An inverted pyramid is a downward pattern where numbers get reduced in each iteration, and on the last row, it shows only one number. Use reverse for loop to print this pattern.

Pattern

1 1 1 1 1

2 2 2 2

3 3 3

4 4

5

PROGRAM:

n=int(input(“Enter the Value :”))

for i in range(1,n+1):

print()

for j in range(n-i,0,1):

print(i,end=’ ’)

OUTPUT:

Enter the value:6

1 1 1 1 1

2 2 2 2

3 3 3

4 4

5

III. Pyramid Pattern - Downward full Pyramid Pattern of star

Let’s see how to print reversed pyramid pattern in Python.

Pattern: – \* \* \* \* \* \*

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

PROGRAM:

n=int(input(“Enter the number of rows:”))

space=0

for i in range(n):

for j in range(space):

print(“ ”,end= “ ”)

space=space+1

for k in range(n-i,0,-1):

print( “\*”,end= “ ”)

print(“ “)

OUTPUT:

Enter the number of rows:6

\* \* \* \* \* \*

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

IV. Check the given number is Armstrong number.

PROGRAM:

n=int(input(“Enter a number:”))

num=n

sum=0

while(n&gt;0):

rem=n%10

sum=sum+(rem\*\*3)

n=n//10

if(sum==num):

print(num,&quot;is an armsrtong number&quot;)

else:

print(num,&quot;is not an armsrtong number&quot;)

OUTPUT:

Enter a number:371

371 is an armsrtong number