**PROBLEM SOLVING AND PYTHON PROGRAMMING RECORD**

PYTHON PROGRAMMING USING SIMPLE STATEMENTS AND EXPRESSION

**EXERCISE NO:** 4

**DATE:** 07/01/2023

**I] NUMBER SERIES:**

**(a**)WRITE A PROGRAM TO FIND SUM OF SERIES 1!+2!+3!+…..+n!

**PROGRAM**:

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

fact = 1

if(n==0):

fact = 1

sum = 0

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

fact = fact\*i

sum = sum + fact

print(sum)

**OUTPUT:**

Enter n value:6

873

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**DATE**: 07/01/2023

**I] NUMBER SERIES:**

**(b)** WRITE APROGRAM TO FIND THE SUM OF SERIES 9+99+999+….N

**PROGRAM:**

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

sum = 0

num = 9

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

sum = sum + num

num = (num\*10)+9

print("The sum of the series=", sum)

**OUTPUT:**

Enter the range of number:3

The sum of the series= 1107

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**II] NUMBER PYRAMID:**

**(a)**REVERSE PYRAMID OF NUMBERS

**PROGRAM:**

n = int(input("Enter number of rows:"))

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

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

a=j

print(a,end=" ")

a = j+1

print()

**OUTPUT:**

Enter number of rows:5

1

2 1

3 2 1

4 3 2 1

5 4 3 2 1

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**III] PYRAMID PATTERN**

1. RIGHT START PATTERN OF STAR

**PROGRAM:**

n = int(input("Enter range value:"))

for i in range(n):

for j in range(i+1):

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

print()

for i in range(n):

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

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

print()

**OUTPUT**:

Enter range value:5

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**DATE**: 07/01/2023

**IV]** PRINT ALL LEAP YEARS FROM 1900-2000

**PROGRAM**:

startYear = int(input("Enter start year:"))

endYear = int(input("Enter end year:"))

for year in range(startYear,endYear):

if(year%4==0) and (year%100!=0) or (year%400==0):

print(year,end=" ")

**OUTPUT**:

Enter start year:1900

Enter end year:2001

1904 1908 1912 1916 1920 1924 1928 1932 1936 1940 1944 1948 1952 1956 1960 1964 1968 1972 1976 1980 1984 1988 1992 1996 2000

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