**#Python program using Pascal triangle**

def print\_pascals\_triangle(n):

triangle=[[0]\*(n+1) for \_ in range(n+1)]

for i in range(n):

triangle[i][0]=1

for i in range(1,n):

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

triangle[i][j]=triangle[i-1][j-1]+triangle[i-1][j]

for i in range(n):

for \_ in range(n-i-1):

print("",end=" ")

for j in range(i+1):

print(triangle[i][j],end=' ')

print()

rows=int(input("Enter the number of rows for pascal's triangle: "))

print\_pascals\_triangle(rows)

\*\*\*OUTPUT\*\*\*

Enter the number of rows for pascal's triangle: 5

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

**#Program to check the given number is Palindrome or not**

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

temp=n

rev=0

while(n>0):

dig=n%10

rev=rev\*10+dig

n=n//10

if(temp==rev):

print("The number is a palindrome!")

else:

print("The number isn't palindrome!")

\*\*\*OUTPUT\*\*\*

Enter number:6

The number is a palindrome!

**# Python program for simple calculator**

# Function to add two numbers

def add (num1, num2):

return num1 + num2

# Function to subtract two numbers

def subtract (num1, num2):

return num1 - num2

# Function to multiply two numbers

def multiply(num1, num2):

return num1 \* num2

# Function to divide two numbers

def divide(num1, num2):

return num1 / num2

print("Please select operation -\n" \

"1. Add\n" \

"2. Subtract\n" \

"3. Multiply\n" \

"4. Divide\n")

# Take input from the user

select = int(input("Select operations form 1, 2, 3, 4 :"))

number\_1 = int(input("Enter first number: "))

number\_2 = int(input("Enter second number: "))

if select == 1:

print(number\_1, "+", number\_2, "=",

add(number\_1, number\_2))

elif select == 2:

print(number\_1, "-", number\_2, "=",

subtract(number\_1, number\_2))

elif select == 3:

print(number\_1, "\*", number\_2, "=",

multiply(number\_1, number\_2))

elif select == 4:

print(number\_1, "/", number\_2, "=",

divide(number\_1, number\_2))

else:

print("Invalid input")

\*\*\*OUTPUT\*\*\*

Please select operation -

1. Add

2. Subtract

3. Multiply

4. Divide

Select operations form 1, 2, 3, 4 :1

Enter first number: 15

Enter second number: 14

15 + 14 = 29

**# Python program to remove the punctuations from a string**

def remove\_commas(string):

result = ""

for char in string:

if char != ",":

result += char

return result

input\_string = "Hello , world, in python ."

output\_string = remove\_commas(input\_string)

print(output\_string)

\*\*\*OUTPUT\*\*\*

Hello world in python .

**# program to find the sum of digits of a given number**

n=int(input("Enter a number:"))

tot=0

while(n>0):

dig=n%10

tot=tot+dig

n=n//10

print("The total sum of digits is:",tot)

\*\*OUTPUT\*\*

Enter a number:1

The total sum of digits is: 1

**#program to find out the roots of the quadratic equations**.

import cmath

a=int(input("Enter a number: "))

b=int(input("Enter a number: "))

c=int(input("Enter a number: "))

d=(b\*\*2)-(4\*a\*c)

root1=(-b-cmath.sqrt(d))/(2\*a)

root2=(-b-cmath.sqrt(d))/(2\*a)

print(root1,root2)

\*\*\*OUTPUT\*\*\*

Enter a number: 3

Enter a number: 4

Enter a number: 5

(-0.6666666666666666-1.1055415967851332j) (-0.6666666666666666-1.1055415967851332j)

**#program to display the Fibonacci series using generators**.

num=int(input("Enter a number: "))

n1,n2=0,1

sum=0

if num<=0:

print("The number should be greater than 0")

else:

for i in range(0,num):

print(sum,end=" ")

n1=n2

n2=sum

sum=n1+n2

print("\nThis is a fibonacii series: ")

\*\*OUTPUT\*\*

Enter a number: 5

0 1 1 2 3

This is a fibonacii series: