INPUT

#Write program calculate binomial coefficient of a number(Manasvi,Ripunjay)

def factorial(a):

factorial = 1

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

factorial =factorial\*i

return factorial

def binomial\_coefficient(n,r):

num =factorial(n)/factorial(r)\*factorial(n-r)

return num

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

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

print("binomial coefficient",binomial\_coefficient(b,q))

OUTPUT

Enter a number : 6

Enter a number : 2

binomial coefficient 8640.0

INPUT

#addition, subtraction, multiplication or division of two numbers(Manasvi,Ripunjay)

print(''addition = +

subtraction = -

multiplication = \*

division = / '')

def calculator(p,q):

n =(input("Enter a operator : "))

if n == "+":

print(p+q)

elif n== "-":

print(p-q)

elif n== "\*":

print(p\*q)

elif n== "/":

print(p/q)

else :

print("invalid operator")

f = float(input("Enter first number: "))

v = float(input("Enter second number: "))

calculator(f,v)

OUTPUT

addition =+,subtraction = - ,multiplication = \* ,division = /

Enter first number: 4

Enter second number: 2

Enter a operator : +

6.0

addition =+,subtraction = - ,multiplication = \* ,division = /

Enter first number: 4

Enter second number: 2

Enter a operator : -

2.0

addition =+,subtraction = - ,multiplication = \* ,division = /

Enter first number: 4

Enter second number: 2

Enter a operator : \*

8.0

addition =+,subtraction = - ,multiplication = \* ,division = /

Enter first number: 4

Enter second number: 2

Enter a operator : /

2.0

INPUT

#palindrome number(Manasvi,Ripunjay)

def palindrome(x):

return x==x[::-1]

x=input("enter a number:")

ans=palindrome(x)

if ans:

print("1")

else:

print("0")

OUTPUT

enter a number:232

1

INPUT

#calculate power

def power(base,exp=2):

return base\*\*exp

base = int(input('Enter base: '))

ch = input('want to enter exponent value(y/n)?: ')

if ch in 'yY':

exp=int(input('Enter base: '))

print('Power of given values',base,'and',exp,':',power(base,exp))

else:

print('square of given value',base,':',power(base))

OUTPUT

Enter base: 2

want to enter exponent value(y/n)?: 3

square of given value 2 : 4

INPUT

# Insertion sort function(Ripunjay,Manasvi)

def insertion\_sort(i):

for a in range(1,l) :

temp = i[a]

j = a-1

while i[j] > temp and j >= 0 :

i[j + 1] = i[j]

j -= 1

i[j + 1] = temp

return i

i = eval(input('Enter the list : '))

l = len(i)

insertion\_sort(i)

print('List in ascending order : ',i)

OUTPUT

Enter the list : [4,5,3,7,8]

List in ascending order : [3, 4, 5, 7, 8]