def add(x,y):

return x+y

def sub(x,y):

return x-y

def mul(x,y):

return x\*y

def div(x,y):

return x/y

num1=float(input("enter the first number:"))

num2=float(input("enter the second number:"))

print("addition:",add(num1,num2))

print("subtraction:",sub(num1,num2))

print("multipliaction:",mul(num1,num2))

print("division:",div(num1,num2))

OUTPUT:

enter the first number:10

enter the second number:5

addition: 15.0

subtraction: 5.0

multipliaction: 50.0

division: 2.0

def check\_even\_odd(number):

if number%2==0:

return"even"

else:

return"odd"

num=int(input("enter a number"))

result=check\_even\_odd(num)

print("the number is",result)

OUTPUT:

enter a number8

the number is even

def factorial(n):

if n==0:

return 1

else:

return n\*factorial(n-1)

for i in range(1,11):

result=factorial(i)

print("factorial of",i,"is",result)

OUTPUT:

factorial of 1 is 1

factorial of 2 is 2

factorial of 3 is 6

factorial of 4 is 24

factorial of 5 is 120

factorial of 6 is 720

factorial of 7 is 5040

factorial of 8 is 40320

factorial of 9 is 362880

factorial of 10 is 3628800

def factorial(n):

if n==0:

return 1

else:

return n\*factorial(n-1)

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

result=factorial(num)

print("the factorial of",num,"is",result)

OUTPUT:

enter a number:5

the factorial of 5 is 120

def gcd(a,b):

while b!=0:

a,b=b,a%b

return a

num1=int(input("enter the first number:"))

num2=int(input("enter the second number:"))

result=gcd(num1,num2)

print("the GCD of",num1,"and",num2,"is",result)

OUTPUT:

enter the first number:18

enter the second number:36

the GCD of 18 and 36 is 18

def calculate\_sum(number):

total=0

for num in number:

total+=num

return total

list=[]

n=int(input("enter the number of element in the list:"))

for i in range(n):

num=eval(input("enter element:".format(i+1)))

list.append(num)

result=calculate\_sum(list)

print("the sum of the list is:",result)