#Study about Functions:

#https://docs.python.org/3/library/functions.html

#https://docs.python.org/3/library/functions.html#float

#Program1:

# write a function to check whether a string is palindrome #malayalam #mom #dad

def palindrome(x):

return x[::-1]

a=input("Input one string to check palindrome or not\n")

if a==palindrome(a):

print("Yes,",a,"is palindrome\n")

else:

print("No.",a,"is not palindrome\n")

#Program2:

# write function to check whether a no is odd or even

def oddeven(x):

return x%2

a=int(input("Enter one number\n"))

if oddeven(a)==1:

print("Odd number")

else:

print("Even number")

#Program3:

# write function to check whether a no is +ve or -ve

def posneg(x):

return x>=0

a=int(input("Enter one number\n"))

if posneg(a):

print("Postive number")

else:

print("Negative number")

#Program4:

# get two numbers from user and do below process

# (a + b)(a - b)

def arith(x,y):

v1=x+y

v2=x-y

return v1,v2

a=int(input("Enter one number\n"))

b=int(input("Enter Another one number\n"))

print("a+b and a-b is",arith(a,b))

#Program5:

# get three numbers from user and do below process

# (a + b)(a - b)(a-c)

def arith(x,y,z):

v1=x+y

v2=x-y

v3=x-z

return v1,v2,v3

a=int(input("Enter one number for a\n"))

b=int(input("Enter Another one number for b\n"))

c=int(input("Enter Another one number for c \n"))

print("a+b, a-b, a-c is",arith(a,b,c))

#Program6:

#prime or no using function

def primenumber(n):

if (n==1):

return False

elif (n==2):

return True;

else:

for x in range(2,n):

if(n % x==0):

return False

return True

a=int(input("Enter one input to check prime number or not"))

print(a,"is prime number:", primenumber(a))

#Program7:

#armstrong or no using function

#An Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself.

#For example, 371 is an Armstrong number since 3\*\*3 + 7\*\*3 + 1\*\*3 = 371

def armstrong(num):

sum=0

for i in str(num):

sum+=(int(i)\*\*3)

if num == sum:

print(num,"is an Armstrong number")

else:

print(num,"is not an Armstrong number")

return num

a=int(input("Enter number for checking armstrong or not\n"))

print (armstrong(a))

#Program8:

#fibonacci series using functions

def factorial(n):

factorial = 1

if n < 0:

print("factorial does not exist for negative numbers")

elif n == 0:

print("The factorial of 0 is 1")

else:

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

factorial = factorial\*i

return factorial

a=int(input("Enter value for finding factorial\n") )

print (factorial(a))