**Prime**

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

count=0

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

if num%i==0:

count+=1

if count==2:

print(num,"is prime")

else:

print(num,"is not prime")

**output**

==== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/prime.py ===

enter a number9

9 is not prime

==== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/prime.py ===

enter a number23

23 is prime

**Fibonacci**

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

a=0

b=1

if n<0:

print("incorrect input")

elif n == 0:

print(a)

elif n == 1:

print(a)

else:

for i in range(2,n):

c=a+b

a=b

b=c

print(b)

**output**

===== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/fib.py ====

enter a number10

1

2

3

5

8

13

21

34

**Factorial**

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

fact=1

if num == 0:

print("factorial of",num,"is",fact)

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

fact=fact\*i

print("factorial of",num,"is",fact)

**output**

==== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/fact.py ====

enter a number5

factorial of 5 is 120

**Armstrong**

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

sum=0

temp=num

while temp>0:

digit=temp%10

sum+=digit\*\*3

temp//=10

if num==sum:

print(num,"is armstrong")

else:

print(num,"is not armstrong")

**output**

== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/armstrong.py =

enter a number663

663 is not armstrong

== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/armstrong.py =

enter a number407

407 is armstrong

**N prime numbers**

n=int(input("enter a limit"))

print("prime upto",n,"are")

for i in range(2,n + 1):

if i > 1:

for j in range(2,i):

if(i%j==0):

break

else:

print(i)

**output**

=== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/prime n.py ==

enter a limit6

prime upto 6 are

2

3

5

**Perfect**

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

sum=0

for i in range(1,n):

if n%i==0:

sum=sum+i

if(sum==n):

print("perfect number")

else:

print("not perfect number")

**output**

=== RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python310/perfect.py ==

enter a number27

not perfect number