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
```