

FUNCTIONAL ARGUMENTS

```
def greet(name):  
    print("hello",+name +"!")  
    greet("alice")
```

POSTIONAL ARGUMENTS

```
def add(a,b):  
    return a+b  
result=add(5,3)  
print(result)  
  
8
```

KEYWORD ARGUMENT

```
def greet(name,message):  
    print(message+ "," + name + "!")  
    greet(name="alice", message="hello")  
  
def greet(name, age):  
    print(f"Hello {name}, you are {age} years old.")  
  
greet(age=19, name="Nida")  # Keyword: order doesn't matter  
  
Hello Nida, you are 19 years old.
```

DEFAULT ARGUMENT

```
def greet(name, message="hello"):  
    print(message + ", " + name + "!")  
greet("alice")  
greet("bob","hi")  
  
hello, alice!  
hi, bob!
```

VARIABLE LENGTH ARGUMENT

```
def nida(**numbers):  
    for key , value in numbers.items():  
        print(f"{key}:{value}")  
nida(name="nida", age="19",city="new banglore")
```

```
name:nida
age:19
city:new banglore
```

RETURN STATEMENT

```
def square(num):
    return num*num
result=square(5)
print(result)
```

```
25
```

MODULE

```
import math
print(math.sqrt(16))

4.0

from math import pi, sin
print(pi)
print(sin(math.radians(90)))
```

```
3.141592653589793
1.0
```

WRITE A FUNCTION TO CHECK IF A NUMBER IS PRIME

```
def is_prime(number):
    if number <=1:
        return False
    for i in range(2,int(number**0.5)+1):
        if number % i == 0:
            return False
```

```
num=int(input("enter a number:"))
if is_prime(num):
    print(num,"is a prime number")
else:
    print(num,"is not a prime number")
```

```
enter a number:4
4 is not a prime number
```

```
def fibonacci(n):
    sequence =[]
    a,b=0,1
    for _ in range(n):
        sequence.append(a)
```

```

    a, b=b, a+b
    return sequence
terms=int(input("enter the number of terms:"))
print("fibonacci sequence:", fibonacci(terms))

enter the number of terms:4
fibonacci sequence: [0, 1, 1, 2]

import math
angle = float(input("enter an angle in degrees:"))
radian=math.radians(angle)
print("sine of angle:",math.sin(math.sin(radian)))
print("cosine of angle:",math.cos(radian))

enter an angle in degrees:90
sine of angle: 0.8414709848078965
cosine of angle: 6.123233995736766e-17

def reverse_string(s):
    return s[::-1]

text=input("enter a string:")
print("reversed string:",reverse_string(text))

enter a string:20
reversed string: 02

def gcd(a,b):
    while b:
        a,b = b, a % b
    return a

num1=int(input("enter first number:"))
num2=int(input("enter second number:"))
print("gcd:", gcd(num1,num2))

enter first number:6
enter second number:7
gcd: 7

```