In [1]:
```
def greet():
    print('hello')
    print('good morning team')
```

In [3]:
```
def greet():
    print('hello')
    print('good morning team')
greet()
```

```
hello
good morning team
```

In [5]:
```
def greet():
    print('hello')
    print('good morning team')
greet()

def greet():
    print('hello')
    print('good morning team')
greet()
```

```
hello
good morning team
hello
good morning team
```

In [7]:
```
def greet():
    print('hello')
    print('good morning team')
greet()

print()

def greet():
    print('hello')
    print('good morning team')
greet()
```

```
hello
good morning team

hello
good morning team
```

In [9]:
```
def greet():
    print('hello')
    print('good morning team')
greet()

print()

def greet():
    print('hello')
    print('good morning team')
greet()

print()
```

```
def greet():
    print('hello')
    print('good morning team')
greet()
```

```
hello
good morning team

hello
good morning team

hello
good morning team
```

In [11]:
```
def greet():
    print('hello')
    print('good morning team')
greet()
print('***********')
greet()
print('***********')
greet()
```

```
hello
good morning team
***********
hello
good morning team
***********
hello
good morning team
```

In [13]:
```
def greet():
    print('hello')
    print('good morning team')
greet()
```

```
hello
good morning team
```

In [17]:
```
def add(x,y):
    c=x+y
    print(c)
add(3,2)
```

```
5
```

In [19]:
```
def add(x,y):
    c=x+y
    return(c)

add(5,4)
```

Out[19]: 9

In [21]:
```
def add(x,y):
    c=x+y
    print(c)

add(5)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[21], line 5
      2     c=x+y
      3     print(c)
----> 5 add(5)

TypeError: add() missing 1 required positional argument: 'y'
```

In [23]:
```
def add(x,y):
    c=x+y
    print(c)
add(3,4,5)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[23], line 4
      2     c=x+y
      3     print(c)
----> 4 add(3,4,5)

TypeError: add() takes 2 positional arguments but 3 were given
```

In [25]:
```
def add(x,y,z):
    c=x+y
    return c

add(5,6,7)
```

Out[25]: 11

In [27]:
```
def add(x,y,z):
    c=x+y+z+m
    return c

add(5,6,7)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[27], line 5
      2     c=x+y+z+m
      3     return c
----> 5 add(5,6,7)

Cell In[27], line 2, in add(x, y, z)
      1 def add(x,y,z):
----> 2     c=x+y+z+m
      3     return c

NameError: name 'm' is not defined
```

In [29]:
```
def add(x,y,z,m):
    c=x+y+z+m
    return c

add(5,6,7,8)
```

Out[29]: 26

In [31]:
```
def greet():
    print('hello')
    print('good morning team')
greet()

def add(x,y):
    c = x+y
    return c

add(5,6)
```

```
hello
good morning team
```

Out[31]: 11

In [33]:
```
def greet():
    print('hello')
    print('good morning team')

def add(x,y):
    c = x+y
    return c

def sub(x,y):
    d = x-y
    return d


greet()
print(add(5,6))
print(sub(5,6))
```

```
hello
good morning team
11
-1
```

In [35]:
```
def add_sub(x,y):
    c= x+y
    d= x-y
    return c, d

result = add_sub(4,5)
print(result)
print(type(result))
```

```
(9, -1)
<class 'tuple'>
```

In [39]:
```
def add_sub(x,y):
    c= x+y
    d= x-y
    return c, d

result, result1 = add_sub(4,5)

print(result)
print(result1)
print(type(result))
print(type(result1))
```

```
9
-1
<class 'int'>
<class 'int'>
```

In [43]:
```
def add_sub_mul(x,y):
    c= x+y
    d= x-y
    e= x*y
    return c, d, e

add, sub, mul = add_sub_mul(4,5)

print(add)
print(sub)
print(mul)
```

```
9
-1
20
```

In [45]:
```
def update():
    x = 8
    print(x)
update()
```

```
8
```

In [47]:
```
def update():
    x = 8
    print(x)

update(8)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[47], line 5
      2     x = 8
      3     print(x)
----> 5 update(8)

TypeError: update() takes 0 positional arguments but 1 was given
```

In [49]:
```
def update(x): #update function take the value from the user
    x = 8
    return x

update(100)
```

Out[49]: 8

In [51]:
```
def update(x):
    x = 8
    return x

a = 15
update(a)
print(a)
```

```
15
```

7th August

In [14]:
```
def person(name,age):
    print(name)
    print(age)
person('nit', 25)
```

```
nit
25
```

In [16]:
```
def person(name,age):
    print(name)
    print(age)
person('nit')
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[16], line 4
      2     print(name)
      3     print(age)
----> 4 person('nit')

TypeError: person() missing 1 required positional argument: 'age'
```

In [18]:
```
def person(name,age):
    print(name)
    print(age)
person('nit', 25,35)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[18], line 4
      2     print(name)
      3     print(age)
----> 4 person('nit', 25,35)

TypeError: person() takes 2 positional arguments but 3 were given
```

In [20]:
```
def person(name,age):
    print(name)
    print(age-1)
person(25,'nit')
```

```
25
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[20], line 4
      2     print(name)
      3     print(age-1)
----> 4 person(25,'nit')

Cell In[20], line 3, in person(name, age)
      1 def person(name,age):
      2     print(name)
----> 3     print(age-1)

TypeError: unsupported operand type(s) for -: 'str' and 'int'
```

Keyword Argument

In [24]:
```
def person(name,age):
    print(name)
    print(age-1)
person(age=25, name='james')
```

```
james
24
```

In [28]:
```
def person(name,age,new_age):
    print(name)
    print(age)
    print(new_age)
person(age=25, name='Lokith',new_age= 35)
```

```
Lokith
25
35
```

Default Argument

In [32]:
```
def person(name,age=18):
    print(name)
    print(age)
person('nit', 25)
```

```
nit
25
```

In [34]:
```
def person(name,age=18):
    print(name)
    print(age)
person('nit', 40)
```

```
nit
40
```

Variable Length

In [37]:
```
def person(name,age):
    print(name)
    print(age)
person('nit', 25,35,45,55,65)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[37], line 4
      2     print(name)
      3     print(age)
----> 4 person('nit', 25,35,45,55,65)

TypeError: person() takes 2 positional arguments but 6 were given
```

In [39]:
```
def sum(a,b):
    c=a+b
    print(c)
sum(10,20)
```

```
30
```

In [41]:
```
def sum(a,*b):
    #c=a+b
    print(type(a))
    print(type(b))
sum(10,20,30,40)
```

```
<class 'int'>
<class 'tuple'>
```

In [43]:
```
def sum(a, *b):
    c = a
    for i in b:
        c = c + i
    print(c)

sum(5,6,7,8)
```

```
26
```

In [45]:
```
def sum(a, *b):
    c = a
    for i in b:
        c = c + i
    print(c)

sum(5,6,7,8,9,20)
```

```
55
```

In [47]:
```
def sum(a, *b): # 1st argument is fixed & we fetch each value from the tuple & w
    c = a
    for i in b:
        c = c + i
    print(c)

sum(5,6,7,8)
```

```
26
```

Kwargs

In [50]:
```
def person():
    person('ALEX', 36, 'JOHN', 987767)
```

In [52]:
```
def person(name, *data):
    print(name)
    print(data)

person('ALEX', 36, 'JOHN', 987767)
```

```
ALEX
(36, 'JOHN', 987767)
```

In [54]:
```
def person(name,*data):
    print('name')
    print(data)

person('ALEX', age = 36, home_place ='southcity', mob =987767)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[54], line 5
      2     print('name')
      3     print(data)
----> 5 person('ALEX', age = 36, home_place ='southcity', mob =987767)

TypeError: person() got an unexpected keyword argument 'age'
```

In [56]:
```
def person(name,**data):
    print('name')
    print(data)

person('ALEX', age = 36, home_place ='southcity', mob =987767)
```

```
name
{'age': 36, 'home_place': 'southcity', 'mob': 987767}
```

In [58]:
```
def person(name, **data):
    print('name')
    print(data)

person('ALEX', age = 36, home_place ='southcity', mob =987767, slary= 40000, mar
```

```
name
{'age': 36, 'home_place': 'southcity', 'mob': 987767, 'slary': 40000, 'married':
'yes'}
```

Global Variables & Local Variables

In [61]:
```
a = 10  #-- globla variable

def something():
    b = 15 #local variable
```

In [65]:
```
a = 10  #-- globla variable

def something():
    b = 15 #local variable

    print('in function',b)
print('out function',a)
```

```
out function 10
```

In [67]:
```
a = 10

def something():
    a = 15

print('in function',a)

print('out function',a)
```

```
in function 10
out function 10
```

In [69]:
```
a = 10

def something():
    b = 15
    print('in function',b)
something()

print('out function',a)
```

```
in function 15
out function 10
```

In [71]:
```
a = 10

def something():

    print('in function',a)

something()
print('out function',a)
```

```
in function 10
out function 10
```

In [73]:
```
a = 10
def something():
    global a
    b = 15
    print('in function',b)
    print('global variable', a)

something()

print('out function',a)
```

```
in function 15
global variable 10
out function 10
```

In [75]:
```
a = 20

def something():
    global a
    a = 15
    print('in function',a)

    a = 15
```

```
something()
print('out function',a)
```

```
in function 15
out function 15
```

In [77]:
```
x = 10  # Global variable

def update_x():
    global x  # Declare that we are using the global variable x
    x += 5    # Modify the global variable

update_x()
print(x)  # Output: 15
```

```
15
```

In [ ]:
```

```