

# function in python

```
In [1]: def hello():  
        print('good evening')  
        hello()
```

good evening

```
In [2]: def hello():  
        print('good evening')  
        hello()  
  
        def hello():  
            print('good evening')  
            hello()  
  
        def hello():  
            print('good evening')  
            hello()
```

good evening  
good evening  
good evening

```
In [3]: def hello():  
        print('good evening')  
        hello()  
  
        hello()  
  
        hello()  
  
        hello()
```

good evening  
good evening  
good evening  
good evening

```
In [4]: def add (x,y):  
  
        c=x+y  
        print(c)  
        add(5,6)
```

11

```
In [5]: def add (x,y,z):  
  
        c=x+y +z  
        print(c)  
        add(5,6,7)
```

18

```
In [6]: def hello():  
        print('good evening')  
        hello()
```

```
def add (x,y):  
    c=x+y  
    print(c)  
add(5,6)
```

good evening  
11

```
In [7]: def hello():  
        print('good evening')  
        def add (x,y):  
            c=x+y  
            print(c)  
        hello()  
        add(5,6)
```

good evening  
11

```
In [8]: def greet():  
        print('hello')  
        print('good noon')  
  
        def add(x,y):  
            c=x+y  
            print(c)  
  
        def sub(x,y,z):  
            d = x-y-z  
            print(d)  
  
        greet()  
        add(5,4)  
        sub(10,2,4)
```

hello  
good noon  
9  
4

```
In [9]: def add_sub(x,y):  
        c= x+y  
        d= x-y  
        return c,d  
  
        add_sub(4,5)
```

Out[9]: (9, -1)

```
In [10]: 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 [11]: 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 [12]: def add_sub_mul(x,y):
          c= x+y
          d= x-y
          e = x*y
          return c, d, e

          result, result1, result2 = add_sub_mul(4,5)

          print(result)
          print(result1)
          print(result2)

          print(type(result))
          print(type(result1))
          print(type(result2))
```

```
9
-1
20
<class 'int'>
<class 'int'>
<class 'int'>
```

```
In [13]: def update():
          x = 8
          print(x)
          update()
```

```
8
```

```
In [14]: def add(a,b): # a & b are called as formal argument
          c = a+b
          print(c)
          add(5,6)
```

```
11
```

```
In [15]: # positional argument

          def person(name,age):
              print(name)
```

```
print(age)

person('nit',22)
```

nit  
22

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

          person(22,'nit')
```

22  
nit

```
In [17]: def person(name,age):
          print(name)
          print(age-1)

          person(22,'nit')
```

22

```
-----
TypeError                                Traceback (most recent call last)
Cell In[17], line 5
      2     print(name)
      3     print(age-1)
----> 5 person(22,'nit')

Cell In[17], 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'
```

```
In [18]: def person(name,age):
          print(name)
          print(age+2)

          person('nit',22)
```

nit  
24

```
In [19]: def person(name,age):
          print(name)
          print(age)

          person('nit')
```

```
-----
TypeError                                Traceback (most recent call last)
Cell In[19], line 5
      2     print(name)
      3     print(age)
----> 5 person('nit')

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

```
In [20]: def person(name,age):  
        print(name)  
        print(age+1)  
  
        person(22)
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[20], line 5  
      2     print(name)  
      3     print(age+1)  
----> 5 person(22)  
  
TypeError: person() missing 1 required positional argument: 'age'
```

```
In [21]: def person(name):  
  
        print(name)  
        print(age+1)  
  
        person('nit', 22)
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[21], line 6  
      3     print(name)  
      4     print(age+1)  
----> 6 person('nit', 22)  
  
TypeError: person() takes 1 positional argument but 2 were given
```

## keyword argument

```
In [22]: def person(name,age):  
  
        print(name)  
        print(age+1)  
  
        person('nit', 22)
```

```
nit  
23
```

```
In [23]: def person(name, age):  
  
        print(name)  
        print(age+1)  
  
        person(22, 'nit')
```

```
22
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[23], line 6  
      3     print(name)  
      4     print(age+1)  
----> 6 person(22, 'nit')  
  
Cell In[23], line 4, in person(name, age)  
      1 def person(name, age):  
      3     print(name)  
----> 4     print(age+1)  
  
TypeError: can only concatenate str (not "int") to str
```

```
In [24]: def person(name, age):  
  
        print(name)  
        print(age+1)  
  
        person(age = 22, name = 'nit', phone = 879678)
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[24], line 6  
      3     print(name)  
      4     print(age+1)  
----> 6 person(age = 22, name = 'nit', phone = 879678)  
  
TypeError: person() got an unexpected keyword argument 'phone'
```

```
In [25]: def person(name, age, phone):  
  
        print(name)  
        print(age+1)  
        print(phone)  
  
        person(age = 22, name = 'nit', phone = 879678)
```

```
nit  
23  
879678
```

```
In [26]: def person(name, age=18):  
  
        print(name)  
        print(age)  
  
        person('nit')
```

```
nit  
18
```

```
In [ ]:
```

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In [ ]:
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In [ ]:
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In [ ]:
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In [ ]:

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