

```
#defining a function
def add(a,b):
    c=a+b
    print(c)

#main (calling a function)
add(5,6)
add(7,5)
add(7,7)
```

```
↔ 11
   12
   14
```

```
# simple function use and print

def sub(a,b): #declare the function
    c=a-b
    print(c)

#call the function

sub(10,5)
```

```
↔ 5
```

```
# pass by reference vs value

def changeme(mylist):
    mylist[2]=50
    return

mylist=[10,20,30,40]
print(mylist)
changeme(mylist)
print(mylist)
```

```
↔ [10, 20, 30, 40]
   [10, 20, 50, 40]
```

```
# return statement

def sum(a,b):
    c=a+b
    print(c)
    return c #return will return same value and print it.

# calling the function

sum(5,5)
sum(10,15)
```

```
↔ 10
   25
   25
```

```
# argument and parameters

def add(x,y):
    print(x+y)
    x=15
    return x

#main
add(x,15)
add(10,10)
```

```
# passing parameters

def sum(a,b):
    c=a+b
    print(c)

#main
sum(10,20)
```

```
↔ 30
```

```
# default arguments

def msg(id,name,age=21):
    print(id)
    print(name)
    print(age)

#main
msg(1,"vivek",22) #given
msg(1,"vivek") #if not given then default parameter value is called like age=21.
```

```
↩ 1
   vivek
   22
   1
   vivek
   21
```

```
# keyword argument

def msg(name,age):
    print(name)
    print(age)

#main
msg(name="vivek",age=22)
msg(age=22,name="chauhan")
```

```
↩ vivek
   22
   chauhan
   22
```

#anonymous function means when you perform calculation without declaring a statement

```
square = lambda x1:x1/x1
```

```
#main
square(5)
```

```
↩ 1.0
```

#scope of variables here is local variables

#local variable declare inside the function

```
def msg():
    a=10
    print(a)

#main
msg()
print(a) #it's shows an error cause the variable is declare inside the function it can't pass the value outside the function.
```

```
↩ 10
-----
NameError                                Traceback (most recent call last)
<ipython-input-41-e0912329b140> in <cell line: 11>()
      9 #main
     10 msg()
--> 11 print(a) #it's shows an error cause the variable is declare inside the function it can't pass the value outside the
function.

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

#scope of variables here is global variables

#global variable declare outside the function

```
y=30 #global variable
def msg():
    x=10
    print(x)
    print(y) #we can print inside the function cause it is a global variable.
```

```
#main
msg()
print(y)
```



10
30
30

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