```
In [2]:  #functions a block of code which is executed only when it is called.
         #to define a function we use def
         def helloWorld():
             print('hello world')
```

```
In [3]:  #??? why nothing happened because the code will not executed until you call it
         helloWorld()
```

```
hello world
```

```
In [4]:  helloWorld()
         helloWorld()
         helloWorld()
```

```
hello world
hello world
hello world
```

```
In [5]:  def helloWorld():
             print('helloWorld')
             print('my name is aziz')
         helloWorld()
```

```
helloWorld
my name is aziz
```

```
In [6]:  #arguments or parameters
         helloWorld('name')
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-6-601af88b24a6> in <module>
      1 #arguments or parameters
----> 2 helloWorld('name')

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

```
In [7]:  #error showed up cuz the func takes no arguments
         def hello(name):# inside(you put the arguments)
             print('hello '+name)
         hello('aziz')
```

```
hello aziz
```

```
In [8]:  hello('aziz')
         hello('ali')
         hello('nora')
```

```
hello aziz
hello ali
hello nora
```

```
In [11]: myname = 'aziz'
         hello(myname)
```

```
hello aziz
```

```
In [12]: hello('aziz','ali')
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-12-a93f1a365ff5> in <module>
----> 1 hello('aziz','ali')

TypeError: hello() takes 1 positional argument but 2 were given
```

```
In [14]: #we cant send two arguments because the function take one
         def hello(name1,name2):
             print(name1+' ',name2)
         hello('aziz','ali')
```

```
aziz  ali
```

```
In [16]: hello('aziz','ali',20)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-16-d3b246548eb8> in <module>
----> 1 hello('aziz','ali',20)

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

```
In [19]: #the same error to fix that
         def hello(first_name,last_name,age):
             print('your first name:'+first_name+' ','your last name:'+last_name+' ','your age:'+str(age))
```

```
hello('aziz','alq',20)
```

```
your first name:aziz  your last name:alq  your age:20
```

In [20]:
```python
def multiply(num1,num2):
    print(num1*num2)
multiply(3,2)
```

```
6
```

In [22]:
```python
#but if we went the value not to print it
#so we will use the return statement
def sum(num1,num2):
    return num1 +num2
sum(2,2)
```

Out[22]: 4

In [23]:
```python
#the func return the sum but not printed
print(sum(2,2))
```

```
4
```

In [26]:
```python
#why return let see
result = multiply(2,3)
x = result+1
```

```
6
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-26-a167ec8644df> in <module>
      1 #why return let see
      2 result = multiply(2,3)
----> 3 x = result+1

TypeError: unsupported operand type(s) for +: 'NoneType' and 'int'
```

In [27]:
```python
#cuz the viable result has no value
result = sum(2,2)
x = result+2
print(x)
```

```
6
```

In [28]:
```python
def iseven(num):
    if num%2==0:
        return True
    else:
        return False
print(iseven(2))
print(iseven(3))
```

```
True
False
```

In [ ]:

Loading [MathJax]/jax/output/CommonHTML/fonts/TeX/fontdata.js