

In [8]:

```
def foo():  
    pass  
print(type(foo))  
print("foo name attribute: ",foo.__name__)
```

```
<class 'function'>  
foo name attribute:  foo
```

In [21]:

```
class abc:  
    def m1(self):  
        pass
```

In [25]:

```
def __init__(self):  
    pass
```

In [12]:

```
class sample:  
    def __init__(mine):  
        mine.a = 13  
        mine.b = 15  
s = sample()  
print(s.a)
```

13

In [11]:

```
def __init__(mine):  
    pass
```

In [13]:

```
class sample:  
    def __init__(self):  
        self.a = 13  
        self.b = 15  
s = sample() # instance creation  
print(s.a)  
print(s.b)
```

13
15

In [65]:

```
class sample:
    def _call_(self):
        pass
s = sample()
print(callable(s))
```

False

In [16]:

```
def sentence ():
    return "hiiii"
print(sentence())
```

hiiii

In [18]:

```
def addexclamation(function):
    def add():
        func = function()
        return func + "!!!!"
    return add
print(add())
```

hiiii, How are you !!!!!

In [17]:

```
def sentence():
    return "hiiii, How are you !!!!!"
def add():
    return "***"+sentence()+"***"
    return add()
print(add())
```

hiiii, How are you !!!!!

In [90]:

```
list1 = [x**2 for x in range(5)]
print(list1)
```

[0, 1, 4, 9, 16]

In [91]:

```
list2=[1,12,15,16,4,8,10]
list3=[x for x in list2 if x%2==0]
print(list3)
```

[12, 16, 4, 8, 10]

In [104]:

```
dict = {'michael' : 19, 'Amar': 9, 'akash':11, 'aka':20}
new_dict = {a:b for (a,b) in dict.items() if b%2!=0 if b<10}
print(new_dict)
```

```
{'Amar': 9}
```

In [105]:

```
dict = {'anil':38, 'amae':28, 'nthony' : 22, 'akash' : 44}
new_dict = {k : ("old" if v>40 else "young") for (k,v) in dict.items()}
print(new_dict)
```

```
{'anil': 'young', 'amae': 'young', 'nthony': 'young', 'akash': 'old'}
```

In [106]:

```
list1 = { 12,13,15,16}
list2 = { 115,111,222,14}
dict = {key:value for (key,value) in zip(list1,list2)}
print(dict)
```

```
{16: 115, 12: 222, 13: 14, 15: 111}
```

In [107]:

```
l1={"AAA","BBB","CCC","DDD"}
l2={"111","222","333","444"}
dict={key:value for (key,value) in zip(l1,l2)}
print(dict)
```

```
{'AAA': '444', 'BBB': '111', 'CCC': '333', 'DDD': '222'}
```

In [111]:

```
l1 = [1,2,3,4,5,6,7,8,9]
set2= { x for x in l1 if x%2 ==0}
print(set2)
```

```
{8, 2, 4, 6}
```

In [122]:

```
l1=[1,2,3,4,5,6,7,8,9]
gen = (x for x in l1 if x%3==0)
for i in gen:
    print(i)
```

```
3
6
9
```

In [123]:

```
class ABC:
    pass
```

In [132]:

```
class collage:
    def __init__(self):
        print("welcome")
s1 = collage()
print("welcome")
```

welcome

In [131]:

```
class Values:
    def __init__(self):
        self.a = 13
        self.b = 15
s = Values()
print(s.a)
print(s.b)
s.b = 29
print(s.b)
```

```
13
15
29
```

In [140]:

```
class values:
    def __init__(hi,a,b):
        hi.a = a
        hi.b = b
s = values(int(input()),int(input()))
print(s.a,s.b)
```

```
1
2
```

TypeError

Traceback (most recent call last)

C:\Users\ANILKU~1\AppData\Local\Temp\ipykernel_12876\4033728607.py in <module>
e>

```
3         hi.a = a
4         hi.b = b
----> 5 s = values(int(input()),int(input()))
6     print(s.a,s.b)
```

TypeError: values() takes no arguments

In [143]:

```
class student:
    def __init__(self,name,age):
        self.name = name
        self.age = age
s1 = student("anil",25)
print(s1.name)
print(s1.age)
```

```
-----
TypeError                                Traceback (most recent call last)
C:\Users\ANILKU~1\AppData\Local\Temp\ipykernel_12876\2094453073.py in <modul
e>
      3         self.name = name
      4         self.age = age
----> 5 s1 = student("anil",25)
      6 print(s1.name)
      7 print(s1.age)
```

TypeError: student() takes no arguments

In [146]:

```
class student(campus):
    pass
s = student(222,'abc')
s.show()
```

```
-----
NameError                                Traceback (most recent call last)
C:\Users\ANILKU~1\AppData\Local\Temp\ipykernel_12876\3092840981.py in <modul
e>
----> 1 class student(campus):
      2     pass
      3 s = student(222,'abc')
      4 s.show()
```

NameError: name 'campus' is not defined

In [160]:

```
class A:
    def __init__(self):
        self.str1="hello"
        print("A")
class B:
    def __init__(self):
        self.str2 = "how are you"
        print("B")
class C(A,B):
    def __init__(self):
        A.__init__(self)
        B.__init__(self)
        self.str3 = "i miss you"
        print("C")
    def printstr(self):
        print(self.str1,self.str2,self.str3)
cobj = C()
cobj.printstr()
```

```
-----
AttributeError                                Traceback (most recent call last)
C:\Users\ANILKU~1\AppData\Local\Temp\ipykernel_12876\1207133851.py in <modul
e>
     16         print(self.str1,self.str2,self.str3)
     17 cobj = C()
--> 18 cobj.printstr()

C:\Users\ANILKU~1\AppData\Local\Temp\ipykernel_12876\1207133851.py in prints
tr(self)
     14         print("C")
     15     def printstr(self):
--> 16         print(self.str1,self.str2,self.str3)
     17 cobj = C()
     18 cobj.printstr()
```

AttributeError: 'C' object has no attribute 'str1'

In []: