Objects are the instances of classes or Classes are the blue prints of objects. From a blue print we can print as many instances as we want.

Classes are like blue print of Car, Laptop Bag, Frooti or other cold-drinks packages (where all the formula, quantity, design of package are mentions)

When working with objects, variables are called attributes and functions are called methods

#Empty_class.py

```
class student:
    pass        # as class without any attribute or method are not allowed so
pass statement is added.

student1= student() # object,named student1 of class, named student is created
student2 = student() # another instant or object of the same class

student1.name = "Rajib" # attributs added to the object, though not a proper w
ay
student1.marks = 85 # to add attributes to the objects, usually we want to put
 attributes inside the class,
# so that all the objects created from the class have these attributes by defa
ult
# similarly we also put methods inside the class, so the all the objects can a
ccess them

print(student1.name)
print(student1.marks)
```

Result:

Rajib

85

Must try – type() & dir() for both student and student1

#class_method_only.py

```
class student:
    def check_pass_fail(self): # whenever we define methods for class we need
to
                               # self as a first argument. This self represent
 the
                               # object calling it.
        if self.marks >= 40:
            return True
        else:
            return False

# instantiate the student class
student1= student()


student1.name = "Rajib"
student1.marks = 85

# call instance methods or access the method of clasd
did_pass = student1.check_pass_fail()
#we have called check_pass_fail method using student1 object, we have called t
his method without
# passing any arguments, however the method defination has an argument self

# But here the self represnt the student1 object and self.marks refers to the
marks attribute of student1
print(student1.name," has passed the exam - ", did_pass)
```

Result:

Rajib has passed the exam - True

__init()__ method

The __init()__ method is a special method that automatically gets called every time the objects are created. [for other methods within class, we need to call]