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 way

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 default

# similarly we also put methods inside the class, so the all the objects can access 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 this 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]