Functions:

A function is a group of statements that together perform a specific task.

Note: Whenever you want to write a specific logic or code again and again more than once use a function instead.

Syntax : def functionname(arg1, arg2, ……..)

statement1

statement2

………

Passing by reference vs value :

So when you passed something by reference what you are doing is you are passing the object itself and when you are passing something by value what you are doing is you are creating a copy of that you know object or the variable and you are passing the copy to the function so you know whereas when you pass something by reference any change that you make the variable inside the function you know those changes are reflected to the outside value as well whereas you know if you pass something by value then the changes that you make you know to the function you know copy of the variable you know those changes are not reflected back to the calling function right so

Object Oriented :

OOP terminology :

* Class : A user defined prototype for an object that defines a set of attributes that characterize any object of the class. The attributes are data members (class variables and instance variables) and methods ,accessed via dot notation.
* Class variable : A variable that is shared by all instances of a class. Class variables are defined within a class but outside any of the class’s methods. Class variables are not used as frequent as instance variable are.
* Data members : A class variable or instance variable that holds data associated with a class and its objects.
* Function overloading : The assignment of more than one behavior to a particular function. The operation performed varies by the types of objects or arguments involved.
* Instance variable : A variable that is defined inside a method and belongs only to the current instance of a class.
* Inheritance: The transfer of the characteristics of a class to other classes that derived from it.
* Instance : An individual object of a certain class. An object obj that belongs to a class Circle, for example, is an instance of a Class circle.
* Instantiation : The creation of an instance of a class.
* Method : A special kind of function that is defined in a class definition.
* Object : A unique instance of a data structure that is defined by its class. A object comprises both data members(class variables and instance variables) and methods.
* Operator overloading: The assignment of more than one function to a particular operator.