**Assignment – 4**

1. What is the difference default and parameterized constructor?

The **default constructor** is a **constructor** that the compiler automatically generates in the absence of any programmer-defined **constructors**. Conversely, the **parameterized constructor** is a **constructor** that the programmer creates with **one** or more parameters to initialize the instance variables of a class.

1. Compare between Instance Method, Class Method, Static method.

**Instance method** can access the **instance methods** and **instance** variables directly. ... **Static methods** can access the **static** variables and **static methods** directly. **Static methods** can't access **instance methods** and **instance** variables directly. They must use reference to object.

1. Difference between class/static variable and instance variable.

**Instance variables** are created when an object is created with the use **of** the keyword 'new' and destroyed when the object is destroyed. **Static variables** are created when the program starts and destroyed when the program stops. **Instance variables** can be accessed directly by calling the **variable** name inside the **class**.

1. What do you understand by decorators in python?

A **decorator** is a design pattern in **Python** that allows a user to add new functionality to an existing object without modifying its structure. **Decorators are** usually called before the definition of a function **you** want to decorate.

1. What is the difference between the @classmethod and @staticmethod?

A **class method** takes cls as first parameter while a **static method** needs no specific parameters. ... On the other hand class methods must have class as parameter. We use @**classmethod decorator in** python to create a **class method** and we use @**staticmethod decorator** to create a **static method in** python.