Assignment # 6

**Define Object Oriented Programming Language?**

Object-Oriented Programming refers to languages that uses objects in programming. Object-oriented programming aims to implement real-world entities like inheritance, hiding, polymorphism etc in programming. The main aim of OOP is to bind together the data and the functions that operate on them so that no other part of the code can access this data except that function.

**List down the Benefits of OOP?**

* It makes code reusable
* Code becomes easily maintainable
* Security of code is maintained through data abstraction and hiding mechanisms

**Differentiate between function and method?**

FUNCTION:

“A function is a block of code to carry out a specific task, will contain its own scope and is called by name. All functions may contain zero(no) arguments or more than one arguments. On exit, a function can or can not return one or more values.”

METHOD:

“A method in python is somewhat similar to a function, except it is associated with object/classes. Methods in python are very similar to functions except for two major differences.

* The method is implicitly used for an object for which it is called.
* The method is accessible to data that is contained within the class.”

DIFFERENCES:

-Unlike a function, methods are called on an object.

-Unlike method which can alter the object’s state, python function doesn’t do this and normally operates on it.

In Short, a method is a function which belongs to an object

**Define the following terms:**

**1. Class**

**2. Object**

**3. Attribute**

**4. Behavior**

CLASS

A class is a special kind of object that’s used as a template for creating instances of itself.

OBJECT

In real-world an entity that has state and its behavior is known as an object

ATTRIBUTE

Characteristics of an object are termed as attributed

BEHAVIOUR

behavior determines how an instance of that class operates; for example, how it will "react" if asked to do something by another class or object or if its internal state changes. Behavior is the only way objects can do anything to themselves or have anything done to them