Assignment 06 (Late Submission)

Q no:1 Define Object Oriented Programming Language?

Answer:

Object-oriented programming (OOP) is a programming language model in which programs are organized around data, or objects, rather than functions and logic. An object can be defined as a data field that has unique attributes and behavior.

Q no :2
List down the Benefits of OOP

Answer:

- Modularity for easier troubleshooting
- Reuse of code through inheritance
- Flexibility through polymorphism
- Effective problem solving

Q no:3
Differentiate between function and method?

Answer:

A **function** is a piece of code that is called by name. It can be passed data to operate on (i.e. the parameters) and can optionally return data (the return value). All data that is passed to a function is explicitly passed.

A **method** is a piece of code that is called by a name that is associated with an object. In most respects it is identical to a function except for two key differences:

A method is implicitly passed the object on which it was called.

A method is able to operate on data that is contained within the class (remembering that an object is an instance of a class - the class is the definition, the object is an instance of that data)

Question 4:

Define the following terms:

Answer:

Class: In **object-oriented** programming, a **class** is a blueprint for creating objects (a particular data structure), providing initial values for state (member variables or attributes), and implementations of behavior (member functions or methods)

Object: **objects** are the things you think about first in designing a program and they are also the units of code that are eventually derived from the process

Attributes: **Attributes** are data stored inside a class or instance and represent the state or quality of the class or instance. In short, attributes store information about the instance.

Behavior: A class's **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.

Qno: 5

Write a code in python in which create a class named it Car which have 5 attributes such like (model, color and name etc.) and 3 methods. And create 5 object instance from that class.