**ASSIGNMENT # 6**

Question 1: Define Object Oriented Programming Language?

Answer 1:

* Object-oriented programming (OOP) is a software programming model constructed around objects. It is a [programming paradigm](https://en.wikipedia.org/wiki/Programming_paradigm) based on the concept of "[objects](https://en.wikipedia.org/wiki/Object_(computer_science))", which can contain [data](https://en.wikipedia.org/wiki/Data), in the form of [fields](https://en.wikipedia.org/wiki/Field_(computer_science)) (often known as attributes or properties), and code, in the form of procedures (often known as [methods](https://en.wikipedia.org/wiki/Method_(computer_science))).

Question 2: List down the Benefits of OOP?

Answer 2:

* Objects can also be reused within an across applications. The reuse of software also lowers the cost of development. More effort is put into the object-oriented analysis and design, which lowers the overall cost of development.
* It provides a clear modular structure for programs which makes it good for defining abstract data-types in which implementation details are hidden.
* Reuse also enables faster development. Object-oriented programming languages come with rich libraries of objects, and code developed during projects is also reusable in future projects.

Question 3: Differentiate between function and method?

Answer 3:

|  |  |  |
| --- | --- | --- |
|  | FUNCTION | METHOD |
| 1 | A function is independent of an object. | A method is on an object. |
| 2 | A function returns some value. | A method doesn't return anything. |
| 3 | A function has return type. | A method has no return type. |

Question 4: Define the following terms:

1. Class: A class is a user defined blueprint or prototype from which objects are created.

2. Object: Objects are the feature of class.

3. Attribute: **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

4. Behavior: The behavior of an object is defined by its methods, which are the functions and subroutines defined within the object class.