Assignment – 4

1. A programming language is a vocabulary and set of grammatical rules for instructing a computer or computing device to perform specific tasks. • The term programming language usually refers to high-level languages, such as BASIC, C, C++, COBOL, Java, FORTRAN, Ada, and Pascal.
2. Programming languages use classes and functions that control commands. The reason that programming is so important is that it directs a computer to complete these commands over and over again, so people do not have to do the task repeatedly. Instead, the software can do it automatically and accurately.
3. Java is a fully object-oriented language, unlike C++ which is semi object-oriented. It supports every OOP concept such as Abstraction, Encapsulation, Inheritance, Polymorphism. Java programs are developed using classes and objects. Another notable feature is that in Java the main() function is defined under a class.
4. A Java object is a member (also called an instance) of a Java class. Each object has an identity, a behavior and a state. The state of an object is stored in fields (variables), while methods (functions) display the object's behavior. Objects are created at runtime from templates, which are also known as classes.
5. A class in Java is a logical template to create objects that share common properties and methods. Hence, all objects in a given class will have the same methods or properties. For example: in the real world, a specific cat is an object of the “cats” class.
6. The Java main method is usually the first method you learn about when you start programming in Java because its the entry point for executing a Java program. The main method can contain code to execute or call other methods, and it can be placed in any class that's part of a program