**CORE JAVA**

**INTRODUCTION:**

 Core Java is the part of Java programming language that is used for creating or developing a general-purpose application**.**

**Java Conventions:**

1. **Class names:**In Java, the first letter of class name for every class should be uppercase.
2. **Method name:**All method names in Java start with a lowercase letter. If the method name comprises more than one word, then the first letter of each of these inner words will be uppercase.
3. **Program file name:**The filename of the Java program should be the same as the name of the public class with an extension “.java”.
4. **Main method:**The method ‘main’ is the starting point of execution and is a compulsory method in all Java programs.

**Java Modifiers:**

Modifiers change the accessibility of variables, methods, etc.

There are two types of modifiers in Java**:**

* **Access modifiers:** There are four access modifiers in Java namely, public, protected, private, and default. These are used to define accessibility for packages, classes, class members, etc.
* **Non-access modifiers:** Java supports non-access modifiers namely – final, abstract, and strictfp. These are mainly used to define inheritance, polymorphism style, etc.

**Comments:**

Comments are the statements that are ignored by the compiler. You can provide comments for your code to make the code more readable and easy to understand.

**Java supports three types of comments:**

* Single line comments denoted by ‘//’
* Multi-line comments represented by ‘/\*… \*/’
* Documentation comments denoted by ‘/\*\* \*\*\*\*\*\*/

**Java Interface:**

An interface in Java is a collection of method signatures and fields. An interface does not have an implementation of methods. A class can inherit from the interface and then implement the interface methods.

**Java Packages:**

Classes and interfaces that have similar functionality or dependency are grouped to form a package. The package makes modularization of code easier in Java.

**JAVA WEB-DEVELOPMENT**

**INTRODUCTION:**

Java is a commonly used language for web development, especially on the server-side. Java web applications are distributed applications that run on the internet. Web development with Java allows us to create dynamic web pages where users can interact with the interface.

**Three approaches for developing Java webapps:**

**Servlet/JSP:**

* It is a lower-level API that does less work for the programmer.
* Provides a high degree of control over the HTML/CSS/JavaScript that’s returned to the browser.

**JSF:**

* It is a higher-level API that does more work for the programmer.
* Makes it more difficult to control the HTML/CSS/JavaScript that’s returned to the browser.

**Spring Framework:**

* It is a higher-level API that does more work for the programmer.
* Provides a high degree of control over the HTML/CSS/JavaScript that’s returned to the browser.

**WebServer:**

**Tomcat**

* It is a servlet/JSP engine that includes a web server.
* It is free, open-source, and runs on all modern operating systems.
* It is a popular web server for Java web applications.

**Steps to Perform CURD Operation:**

* Establish the connection.
* Create the statement object.
* Submit the SQL query to DBMS.
* Close the statement.
* Close the Connection.