**Java**

**Day 1**

* Java Introduction
* JDK, JRE, JVM, JIT, Byte Code
* Why Java Platform Independent (WORA)
* OOP with Java
* Class, Objects and Methods
* Constructor
* Garbage Collector
* Finalize Method
* Arrays in Java
* Method Overloading
* Constructor Overloading
* Static & Final Keywords
* Inheritance
* Method Overriding
* Use of super keyword
* Compare Overloading and Overriding
* Wrapper Class
* Program Example using Eclipses

**DAY 2**

* Abstract Class
* Interface (Normal, Functional, Marker)
* Lambda Expressions
* Interface default and static Methods
* Package
* Access Specifier
* Exception Handling Introduction
* Exceptions Vs Errors
* Checked Exceptions vs Unchecked Exceptions
* Create and Use Custom Exception
* Introduction to Generic
* Collections Framework Introduction
* List Interfaces and ArrayList, LinkedList, Vector
* Set Interface and HashSet, LinkedHashSet, TreeSet
* Map Interface and Hashmap, TreeMap
* Queue Interface
* Comparators/Comparable interfaces

**DAY 3**

* Introduction to Web Application
* 3 Tire Architecture
* URL, URI
* http protocol
* Request and Response Mechanism
* Servlet Introduction
* Building Jar and War Files
* Deploy in Tomcat Server
* Create Maven Project
* Working with POM
* Add dependent Library

**DAY 4**

* Log File Handling (Log4j)
* Best Practices in Java Coding
* Debugging in Detail in Eclipse
* Design Pattern Introduction
* JDBC Introduction
* Connect with MySQL Database
* Statement / Prepared Statement / Result Set
* CRUD Operation using JDBC
* MVC Architecture
* Basic of Spring Boot framework using Maven

**DAY 5**

* TDD
* Understanding Test Cases
* Using Junit for Unit test
* Understanding Test Suites
* Multithread Introduction
* Creating Threads with Extends/implements
* Thread Life Cycle
* Thread Synchronization
* Inter Thread Communication
* Deadlock Concept
* File Handling
* Serialization Concept
* Java Stream Concept
* Byte Stream
* Character Stream