



IT EDUCATION
CENTRE

JAVA



Core Java Syllabus

- ▶ Java Fundamentals
- ▶ Java Applications
- ▶ JVM Architecture
- ▶ How java is platform Independent
- ▶ Difference between JDK JVM and JRE
- ▶ Data Types and Variables in Java
- ▶ Operators and Expressions
- ▶ Control Statements
- ▶ Loops in Java
- ▶ Arrays
- ▶ Command Line Arguments
- ▶ Java 8 and Java 9 Features
- ▶ OOP'S Concepts
- ▶ Overloading and Overriding
- ▶ Inheritance with Interface and Abstract Class
- ▶ Exception Handling
- ▶ Wrapper Classes
- ▶ Garbage Collections
- ▶ Inner Classes
- ▶ Packages
- ▶ String Class
- ▶ String Buffer and StringBuilder Class in Java
- ▶ Multithreading
- ▶ Collection and Generics
- ▶ File I/O
- ▶ Socket Programming
- ▶ AWT and Event Handling
- ▶ GUI Designing Swing
- ▶ JDBC

Advance Java

1. INTRODUCTION OF SOFTWARE TESTING

- ▶ What is Web Application
- ▶ Client and Server Architecture
- ▶ HTTP Protocol
- ▶ J2EEWeb Container and Web Server

2. Web Server Setup

- ▶ Tomcat Introduction
- ▶ Overview, Installation and Configuring Tomcat
- ▶ Setup Servlet Project in Eclipse
- ▶ Configure Servlet API

3. Servlets

- ▶ Introduction
- ▶ HTTP Protocol and HTTP Methods
- ▶ Servlet Interface
- ▶ GenericServlet Interface
- ▶ HTTPServlet Interface
- ▶ Servlet Life Cycle
- ▶ Servlet Config
- ▶ Servlet Context
- ▶ Session Tracking Mechanisms
- ▶ Request Dispatcher Forward and Include method
- ▶ Forwarding and Redirection of requests

4. Jsp

- ▶ Introduction to JSP
- ▶ JSP LifeCycle
- ▶ JSP Implicit Objects
- ▶ JSP Directives
- ▶ JSP Scripting Elements
- ▶ JSP Action Tags
- ▶ Custom Tags
- ▶ JSP with JDBC
- ▶ JSTL and Tag Library

Frameworks

1. Hibernate Framework

- ▶ Introduction
- ▶ ORM Principle
- ▶ Hibernate Architecture
- ▶ Persistent Classes
- ▶ Setting up Hibernate project
- ▶ Configuring JAR and XML file
- ▶ Hibernate CRUD
- ▶ HQL
- ▶ Using SQL with Hibernate
- ▶ Mapping Collections
- ▶ Hibernate Caching
- ▶ Types of Caching mechanisms
- ▶ Criteria Queries.

2. Spring Framework

- ▶ What is Spring
- ▶ Setting up Spring Project
- ▶ Core Spring
- ▶ Dependency Injection.
- ▶ Spring Bean Factory
- ▶ Spring Application Context
- ▶ Spring MVC
- ▶ Spring ORM
- ▶ Spring DAO

3. Spring Boot Framework

- ▶ Spring Boot Introduction
- ▶ Spring Boot Architecture
- ▶ Spring Initializr
- ▶ Download and Install STS IDE
- ▶ Spring Boot CLI
- ▶ Spring Tool Suite
- ▶ Annotations
- ▶ Spring Boot View
- ▶ Spring Boot with Database
- ▶ Spring Boot Caching
- ▶ Web Services: Rest Api