

Module 1: Basics of Web Development using Servlets and JSP (8 Hours)

Introduction to Web Development, Overview of Servlets, Servlet lifecycle, Handling HTTP requests and responses, Introduction to JavaServer Pages (JSP), JSP lifecycle, Writing JSP scripts, Basic web application architecture, Setting up a basic Servlet and JSP project

Module II: JDBC

Database Connectivity using JDBC- Understanding JDBC, Define the layers in JDBC architecture, various types of JDBC drivers, manipulating various SQL Queries, Manage transactions and perform batch updates in JDBC, Creating Database Connectivity Applications, and Connection to Database with the java.sql Package.

Module III: Spring Fundamentals

Introduction to Spring Framework, Dependency Injection and Inversion of Control (IoC)

Aspect-Oriented Programming (AOP), Spring beans and bean configuration, Spring MVC architecture, Creating controllers and views with Spring MVC.

Module IV: Spring Boot Basics

Introduction to Spring Boot, Developing Your First Spring Boot Application, Spring Boot Starter Dependencies and Auto-Configuration, Spring Boot starters and auto-configuration, Spring Boot Annotations, Working with Spring Data JPA and Caching Connecting to databases with Spring Boot, Introduction to Postman for API testing Creating and testing endpoints with Postman

Module V: Building Microservices with Spring Boot

Microservice, Examples of microservice, REST, RESTful Web Services concepts, First REST Service, Designing RESTful APIs, Building RESTful APIs with Spring Boot, Implementing CRUD operations, Request and Response handling, Error handling in RESTful APIs, Logging, Caching.