Curriculum (Duration: 136 Hours)

Module 1: HTML (10 Hours)

- HTML Basics
- Tables
- List
- Working with Links
- Image Handling
- Frames
- HTML Forms for user input
- New Form Elements

Module 2: Cascading Style Sheets (8 Hours)

- Introduction to Cascading Style Sheets (CSS) 3.0
- Working with Text and Fonts
- CSS Selectors
- Class selector
- Color and borders

Module 3: Bootstrap and Javascript (10 Hours)

- Introduction to Bootstrap
- Bootstrap basics
- Bootstrap components
- JavaScript essentials

Module 4: ES6 and Typescript (6 Hours)

- var, Let, and Const keyword
- Arrow functions, Default arguments
- Template Strings, String methods
- Object de-structuring

- Spread and Rest operator
- Typescript Fundamentals
- Types & type assertions, Creating custom object types, function types
- Typescript OOPS - Classes, Interfaces, Constructors

Module 5: Angular (10 Hours)

- Templates, Styles & Directives
- Pipes, Services & Dependency Injection
- Template-Driven and Reactive Forms
- Components Deep Dive / Routing
- Http Requests / Observables
- Authentication and Route Protection
- How Authentication works in SPA
- JWT Module
- JSON Web Tokens
- Signup, Login, and logout application
- Router Protection, Route Guards
- CanActivate interface
- Checking and using Authentication Status
- Router Protection and Redirection

Module 6: Core Java (8 Hours)

- Declarations and Access Control
- Object Orientation
- Assignments
- Operators
- Flow Control, Exceptions
- Maven Fundamentals
- TDD with Junit 5
- Strings, I/O, Formatting, and Parsing
- Generics and Collections
- Threads

- Concurrent Patterns in Java
- Concurrent Collections
- Lambda Expressions
- Stream API
- Practice Case studies on Core Java 8

Module 7: Introductions to Design Patterns (10 Hours)

- Creational Design Pattern
- Structural Design Pattern
- Behavioral Design Pattern
- Presentation Layer Design Pattern
- Business Layer Design Pattern
- Integration Layer Design Pattern

Module 8: DevOps (Git, SonarQube, Maven, Jenkins) (10 Hours)

- Introduction to DevOps
- DevSecOps, SRE, Microservices, GitOps, Data Ops
- GIT Hub
- Jenkins
- Sonar

Module 9: Database & SQL (6 Hours)

- Introduction
- Understanding Basic SQL Syntax
- Querying Data with the SELECT Statement
- Arrays Functions and Operators
- Filtering Results with the Where Clause
- Shaping Results with ORDER BY and GROUP BY
- Matching Different Data Tables with JOINs
- Creating Database Tables

Module 10: Introduction to JDBC (4 Hours)

- Connection Statement
- Prepared Statement
- ResultSet

Module 11: JPA with Hibernate 3.0 (8 Hours)

- Introduction
- Entities
- Managing Entities
- Querying Entities
- Entity Relationships

Module 12: Spring 5.0 (8 Hours)

- Spring Core
- Spring Boot
- Spring Data JPA
- Spring Data REST
- Introduction to Spring Security with Demo
- Introduction to Spring Microservices with Demo

Module 13: Container using Docker & Docker Compose (8 Hours)

- Architecture
- Component
- Engine
- Image
- Registry
- Network
- Volume
- Installation and Configuration

Module 14: Testing (8 Hours)

- Fundamentals of Testing
- V&V
- Builder notations
- Unit Testing & Acceptance Testing & Coverage
- Web applications
- Selenium
- Concepts of Selenium

Module 15: Configuration & Deployment Management (8 Hours)

- Overflow of Configuration Management
- Introduction of Ansible
- Ansible Architecture
- Started with Ansible
- Ansible Authentication & Authorization
- Ansible Adhoc commands
- Ansible Inventory
- Ansible Playbook
- Working with Popular Modules in Ansible

Module 16: Infrastructure Coding - Terraform(8 Hours)

- Deploying Your First Terraform Configuration
- Terraform Components
- Updating Your Configuration with More Resources
- Terraform State and Update
- Data Type and Security Groups
- Configuring Resources After Creation
- Terraform Provisioners
- Terraform Syntax
- Adding a New Provider to Your Configuration
- Terraform Providers

Module 17: Continuous Integration - Jenkins (6 Hours)

- Lets understand Continuous Integration
- What is Continuous Integration
- Benefits of Continuous Integration
- What is Continuous Delivery
- What is Continuous Deployment
- Continuous Integration Tools
- What is Jenkins
- History of Jenkins
- Jenkins Architecture
- Jenkins Vs Jenkins Enterprise
- Jenkins Installation and Configurations
- Jenkins Dashboard Tour
- Understand Freestyle Project