

TechSol

We Build Professionals

JAVA FULL STACK



7302670626

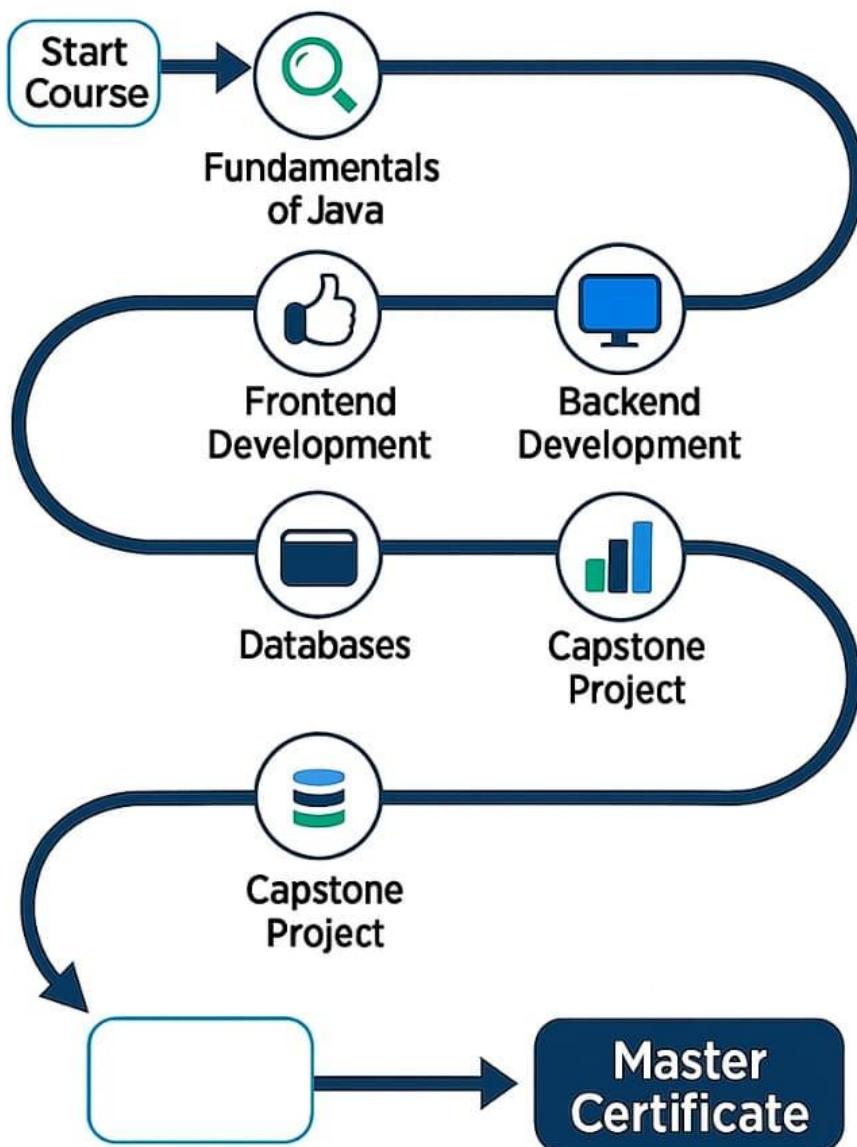


techsol626@gmail.com

TechSol

We Build Professionals

Modules of Java Full Stack



Frontend Development Course Curriculum

1. HTML (Hyper Text Markup Language)

- Structure of HTML document
- Elements, Tags, Attributes
- Forms & Validation
- Tables, Lists, Semantic Tags
- Audio/Video Embedding
- SEO-friendly HTML

2. CSS (Cascading Style Sheets)

- Selectors, Colors, Units
- Box Model
- Positioning (static, relative, absolute, fixed)
- Flexbox, Grid Layout
- Media Queries (Responsive Design)
- Animations & Transitions

3. JavaScript (JS)

- Variables (var, let, const), Data Types
- Operators, Conditions, Loops
- Functions, Scope, Hoisting
- Arrays & Objects
- DOM Manipulation
- Events Handling
- Form Validation

- ES6+ Features (arrow functions, destructuring, promises)

4. Advanced JavaScript

- Closures, Callbacks
- Fetch API / Axios
- Async/Await
- Local Storage / Session Storage
- Error Handling

5. React.js (Frontend Library)

- JSX Syntax
- Components (Function & Class)
- Props and State
- useEffect and useState Hooks
- Conditional Rendering
- Lists and Keys
- Event Handling
- React Router
- Forms in React
- API Integration with Axios
- Redux (basic overview)

6. Frontend Testing (Basic)

- Debugging with Browser DevTools
- Basic Unit Testing (Jest + React Testing Library)

7. Tools for Frontend

- VS Code
- Git & GitHub (Version Control)
- Browser Developer Tools
- NPM/Yarn
- Bootstrap / Tailwind CSS (Optional)

Backend Development Course Curriculum

1. Core Java

- Data Types, Loops, Conditionals
- OOP Concepts: Class, Object, Inheritance, Polymorphism, Abstraction, Encapsulation
- Exception Handling
- Collections Framework (List, Set, Map)
- File I/O
- Multithreading
- Java 8 Features: Streams, Lambda

2. JDBC (Java Database Connectivity)

- JDBC Setup & Drivers
- Connecting Java to MySQL
- CRUD Operations using JDBC

3. Servlet & JSP (Optional, for understanding)

- Servlet Lifecycle
- Request & Response
- Form Handling
- JSP Tags
- MVC with Servlet + JSP

4. Spring Framework

Spring Core

- Dependency Injection
- Bean Configuration (XML/Annotations)

Spring MVC

- Controllers, Services, Models
- View Resolver, ModelMap

Spring Boot

- Project Setup (Spring Initializr)
- REST APIs (GET, POST, PUT, DELETE)
- Annotations: @RestController, @RequestMapping, etc.
- Exception Handling
- DevTools, Actuator

5. JPA and Hibernate

- ORM Concepts
- Entity, Table, ID Mapping
- OneToOne, OneToMany, ManyToOne

- CRUD using JPA Repository
- JPQL & Native Queries

6. Security

- Spring Security Basics
- Authentication & Authorization
- Custom Login Forms
- JWT Token Authentication

7. Testing

- Unit Testing using JUnit
- Mockito for Service Testing

8. Tools for Backend

- IDE: IntelliJ or Eclipse
- Build Tools: Maven or Gradle
- Git & GitHub
- Postman (API testing)
- Loggers (SLF4J, Logback)

9. Deployment (Basic)

- Packaging Spring Boot App (JAR/WAR)
- Deployment on Heroku or AWS EC2
- Connecting Backend to Frontend