



Sai Tech Academy

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Course Curriculum

Core Java

- Introduction
- Installation
- Programming Elements
- Data Types
- Operators
- Control Statements
- Access Modifiers
- Wrapper Classes

Advanced Java

- JDBC
- Architecture of Web Application
- Server-Side Technologies
- Servlet
- WAR File Creation
- Request Dispatching
- Session Management
- JSP
- MVC Architecture



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Spring

- Introduction to Spring
- Spring IoC Container
- Spring AOP
- Spring Data Access
- Spring MVC
- Spring Security Basics
- Spring REST Services
- Spring Testing

Spring Boot

- Introduction to Spring Boot
- Spring Boot Setup
- Spring Boot Annotations
- Spring Boot Data Access
- Spring Boot REST API Development
- Spring Boot Security Basics
- Spring Boot Testing & Profiles
- Spring Boot DevTools & Actuator

Microservices

- Introduction & Architecture
- Service Registration & Discovery
- API Gateway
- Communication Patterns (REST, Messaging)
- Deploying Microservices



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Reactive Programming

- Reactive Programming Concepts
- Mono and Flux
- Reactive Streams & Backpressure
- Reactive Programming with Spring WebFlux

Kafka

- Introduction & Architecture
- Producer & Consumer
- Topics, Partitions, and Offsets
- Kafka Streams & Real-time Messaging

Hibernate

- ORM Concepts
- Entity Mapping
- Session & Transactions
- Querying with HQL

JPA

- JPA Overview & Annotations
- Entity Relationships
- JPQL Queries
- Persistence Context & Transactions



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No SQL

- Introduction to NoSQL
- Types of NoSQL Databases (Key-Value, Document, Column, Graph)
- CRUD Operations
- Integration with Java / Spring Boot
- When to Choose NoSQL
- Scalability and Sharding Concepts
- Data Consistency and CAP Theorem

Maven & Gradle

- Project Structure & Build Lifecycle
- Dependency Management
- Plugins & Custom Tasks

Logging in Java

- Introduction to Logging
- Log Levels & Configuration
- SLF4J & Logback

Docker

- Introduction & Installation
- Docker Images & Containers
- Dockerfile & Docker Compose



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Git Actions

- Introduction & Setup
- Workflow & CI/CD Automation
- Integration with GitHub & Projects

REST & GraphQL

- REST API Concepts & CRUD Operations
- HTTP Methods & Status Codes
- GraphQL Queries & Mutations
- Integration with Backend Services

End-of-Course Activities

- **Real-Time Project Development**
Apply all concepts learned throughout the course by developing a complete, end-to-end project following industry standards and best practices.
- **Resume Building**
Get guided assistance in creating a professional and impactful resume highlighting technical skills, project work, and accomplishments.
- **Personality Development**
Improve communication, teamwork, problem-solving, and interview skills to become career-ready and confident professionals.
- **Naukri Assistance and Referral**
Receive support in setting up or enhancing your Naukri profile, optimizing visibility to recruiters, and getting referral guidance for relevant job opportunities.



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We wish to see you on the best side of life!!!!!!!