



8-Week Intensive Software Development Training

Transform Your Tech Career in Just 2 Months

Program Overview

This comprehensive 8-week program is designed to take you from basics to industry-ready skills. Our hands-on curriculum combines theoretical knowledge with practical projects, ensuring you're job-ready by the end of the training. Learn from experienced mentors with 5-10 years of real-world software development experience.



Duration

8 weeks (2 months) of intensive training with daily hands-on practice



Target Audience

NTTF, Diploma & 12th graduates ready to launch their tech careers



Format

100% practical, project-based learning with real-world applications

Outcome

Industry-ready skills with a complete portfolio project

Complete 8-Week Curriculum

Week 1-2: Java Fundamentals & OOP

Foundation

Learning Objectives

Master Java programming fundamentals and Object-Oriented Programming concepts. Build a solid foundation for backend development.

- **Java Basics:** Syntax, data types, variables, and operators
- **Control Structures:** If-else statements, switch cases, loops (for, while, do-while)
- **Methods & Functions:** Method creation, parameters, return types, method overloading
- **Object-Oriented Programming:** Classes, objects, constructors, access modifiers
- **Core OOP Concepts:** Inheritance, polymorphism, encapsulation, abstraction
- **Exception Handling:** Try-catch blocks, custom exceptions, finally block
- **File I/O:** Reading and writing files, buffered streams
- **Collections Framework:** ArrayList, LinkedList, HashSet, HashMap, TreeMap

Week 1-2 Project

Build a Student Management System using core Java with file-based data persistence. Implement CRUD operations and demonstrate OOP principles.

Week 3-4: Database & Spring Boot Basics

Backend Core

Learning Objectives

Learn database design and SQL, then dive into Spring Boot framework for building enterprise applications.

- **MySQL Setup:** Installation, configuration, MySQL Workbench
- **SQL Fundamentals:** CREATE, ALTER, DROP tables, data types
- **CRUD Operations:** SELECT, INSERT, UPDATE, DELETE queries
- **Advanced SQL:** Joins (INNER, LEFT, RIGHT), subqueries, aggregate functions
- **Database Design:** Normalization, primary keys, foreign keys, relationships
- **Spring Boot Introduction:** Framework overview, architecture, benefits
- **Dependency Injection:** IoC container, @Autowired, bean management
- **Spring Boot Project:** Project structure, application.properties configuration
- **Database Integration:** Connecting Spring Boot with MySQL using JDBC/JPA

Week 3-4 Project

Create a Book Library System with Spring Boot and MySQL. Implement database schema, establish connections, and perform CRUD operations through Spring Data JPA.

Week 5-6: REST APIs & Testing

API Development

Learning Objectives

Master RESTful API development, testing, and documentation. Learn industry-standard practices for building scalable web services.

- **REST Architecture:** RESTful principles, HTTP methods, status codes
- **API Endpoints:** Creating GET, POST, PUT, DELETE endpoints
- **Request Handling:** @RequestBody, @PathVariable, @RequestParam annotations
- **Response Handling:** ResponseEntity, HTTP status codes, error handling
- **Data Validation:** Input validation, @Valid annotation, custom validators
- **JPA & Hibernate:** Entity mapping, relationships, repository pattern
- **API Documentation:** Swagger/OpenAPI integration, API specifications
- **Postman Testing:** Creating collections, environment variables, automated tests
- **Unit Testing:** JUnit, Mockito, testing REST controllers

🎯 Week 5-6 Project

Build a complete E-commerce Product API with full CRUD operations, pagination, search functionality, and comprehensive Swagger

documentation.

Week 7: Frontend Integration & AI Tools

Full Stack

Learning Objectives

Learn frontend fundamentals and API integration. Discover how to leverage AI tools for efficient development.

- **HTML Basics:** Semantic HTML, forms, elements, attributes
- **CSS Styling:** Selectors, flexbox, grid, responsive design
- **JavaScript Fundamentals:** Variables, functions, events, DOM manipulation
- **Fetch API:** Making HTTP requests, handling promises, async/await
- **UI Integration:** Displaying API data, dynamic content rendering
- **Form Handling:** Form submission, validation, error display
- **AI Prompting:** Effective prompting techniques for ChatGPT
- **AI for Development:** Code generation, debugging, learning assistance
- **Context Management:** Providing context to AI tools for better results

🎯 Week 7 Project

Create a fully functional frontend application that consumes your REST API.
Build a responsive UI with real-time data display and form interactions.

Week 8: Capstone Project & Career Preparation

Industry Ready

Learning Objectives

Build a complete full-stack application from scratch and prepare for your tech career with professional development skills.

- **Project Planning:** Requirements gathering, task breakdown, timeline creation
- **Full-Stack Development:** Building complete application (backend + frontend)
- **Git & Version Control:** Git basics, commits, branches, GitHub workflow
- **Code Review:** Best practices, clean code principles, peer review
- **Testing & QA:** Comprehensive testing, bug fixing, quality assurance
- **Deployment Basics:** Application deployment fundamentals
- **Communication Skills:** Professional email, meetings, presentations
- **Resume Building:** Tech resume creation, highlighting projects
- **Interview Preparation:** Common questions, technical rounds, mock interviews

Week 8 Capstone Project

Build a complete Task Management System or your choice of application with full backend API, database, and interactive frontend. Present your project demonstrating all learned skills.

Technologies & Tools Covered

 Java SE

 Spring Boot

 MySQL

 REST APIs

 Swagger

 Postman

 HTML/CSS/JS

 AI Tools

 JPA/Hibernate

 JUnit & Mockito

 Git & GitHub

 Professional Skills

What You'll Achieve

Complete Portfolio

4-5 real-world projects showcasing your full-stack development skills

Industry Skills

Hands-on experience with technologies used by top tech companies

Career Ready

Professional resume, interview skills, and job search strategies

Continued Support

Post-training mentorship and career guidance



Empowering the next generation of software developers

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