Forsk Coding School
Powered Learning for Future Success

JAVA BACKEND / JAIPUR

JAVA
Backend Development

Write the logic.
Build the API.
Connect the data.

Java / OpenJDK

Spring

Hibernate



LEARNING WITH PURPOSE

Build the skill.
Put it into practice.

Training at Forsk Coding School. Full-time internship pathway at Forsk Technologies. Interviews, feedback and focused preparation.

THE LEARNING ROADMAP

From first program to backend service.

Three fee modules, connected through practical application development.

01

Core Java / INR 6,500

Build the language foundations: methods, objects, collections, exceptions, file handling and modern Java practices.

02

Advanced Java + frameworks

Study JDBC and web foundations, then build services with Spring Boot, JPA and Hibernate.

HOW IT CONNECTS

JAVA → WEB + DATA → SPRING BOOT

PRACTICE / WHAT YOU WILL MAKE

Set up the development tools and write a simple program. Record your learning goals and project idea.

CORE JAVA / FOUNDATIONS

Learn the language.
Think in small steps.

Turn a requirement into clear, testable program logic.

01 Programming essentials

JDK and JVM concepts, variables, types, operators, conditions, loops, arrays, strings and methods.

02 Design small solutions

Break the problem into methods. Validate input, handle edge cases and use meaningful names.

HOW IT CONNECTS



PRACTICE / WHAT YOU WILL MAKE

Build a console-based fee calculator. Validate values and explain the total with a sample input.

CORE JAVA / OOP

Model the problem. Organise the code.

Use objects to bring data and behaviour together.

01 Objects and encapsulation

Classes, objects, constructors, fields, methods and access control. Protect valid state through clear public methods.

02 Reuse and abstraction

Inheritance, polymorphism, interfaces and abstract classes. Choose a simple model that matches the problem.

HOW IT CONNECTS

CLASS → OBJECT → BEHAVIOUR

PRACTICE / WHAT YOU WILL MAKE

Model Student and Course objects. Enrol a learner and produce a readable summary.

CORE JAVA / COLLECTIONS

Choose the right data structure.

Work with groups of records using Java collections.

01 List, Set and Map

Compare ordering, uniqueness and key-based lookup. Understand equality, hashing, iteration and generics.

02 Sorting and processing

Use Comparable and Comparator. Practise lambdas, streams, filtering, mapping and Optional where appropriate.

HOW IT CONNECTS

RECORDS → FILTER → TRANSFORM

PRACTICE / WHAT YOU WILL MAKE

Store students, prevent duplicate identifiers and generate a filtered result list. Explain the collection choice.

CORE JAVA / RELIABILITY



Handle failures.
Keep the logic clear.

Build useful habits for debugging and maintainable Java code.

01 **Exceptions and files**

Exception handling, custom exceptions, file I/O and date/time APIs. Distinguish valid input from recoverable errors.

02 **Debugging and concurrency**

Trace execution and inspect state. Learn thread fundamentals, shared-state risks and basic thread-safety concepts.

HOW IT CONNECTS

REPRODUCE → INSPECT → FIX

PRACTICE / WHAT YOU WILL MAKE

Read records from a file, report invalid rows and produce a summary without losing valid entries.

ADVANCED JAVA / DATA

Connect Java to relational data.

Advanced Java module fee: INR 8,000.

01 Relational foundations

Tables, keys, constraints, joins and CRUD concepts. Design a simple model for students, courses or inventory.

02 JDBC in practice

Connections, prepared statements, result sets, mapping and transactions. Keep data access separate from business logic.

HOW IT CONNECTS



PRACTICE / WHAT YOU WILL MAKE

Build a JDBC application that creates, reads and updates records using prepared statements.

ADVANCED JAVA / WEB

Understand the request and response.

Learn the web foundations behind Java server applications.

01 HTTP and Java web

Requests, responses, methods and status codes. Explore Servlet lifecycle, routing, forms and JSP fundamentals.

02 Sessions and application layers

Cookies and sessions; controller, service and DAO responsibilities. Keep presentation separate from data access.

HOW IT CONNECTS



PRACTICE / WHAT YOU WILL MAKE

Create a database-backed student or employee application with a clear responsibility for each layer.

SPRING BOOT / FOUNDATIONS

Configure less.
Understand more.

Spring Boot and Hibernate module fee: INR 8,000.

01 Spring concepts

Inversion of control, dependency injection, beans and configuration. Understand what the framework manages for you.

02 Project setup

Boot starters, Maven dependencies, application properties and profiles. Create an application with a clear package structure.

HOW IT CONNECTS



PRACTICE / WHAT YOU WILL MAKE

Create a small Spring Boot service and inject a dependency. Explain each layer in the request flow.

SPRING BOOT / REST

Build APIs people can work with.

Turn a use case into a consistent HTTP interface.

01 Endpoints and contracts

Controllers, methods, status codes, DTOs and request validation. Plan clear input, output and error responses.

02 API behaviour

Filtering, pagination and exception handling. Study authentication, authorisation and safe configuration concepts.

HOW IT CONNECTS

REQUEST → VALIDATE → PROCESS → RESPOND

PRACTICE / WHAT YOU WILL MAKE

Build a student-management API with CRUD endpoints, validation and a consistent error format.

HIBERNATE + JPA

Let the model connect to the data.

Understand persistence, relationships and transaction boundaries.

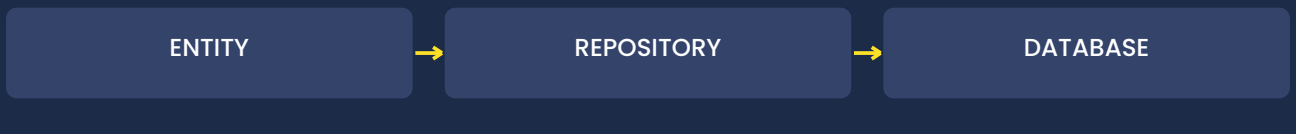
01 Entity mapping

Primary keys, repositories, query methods and JPQL fundamentals. Connect Java entities to relational tables.

02 Relationships and transactions

One-to-many and many-to-many models; fetching strategies, transaction boundaries and common N+1 query pitfalls.

HOW IT CONNECTS



PRACTICE / WHAT YOU WILL MAKE

Model products and orders, add pagination and ensure related updates succeed within a transaction.

TESTING + DEPLOYMENT

Prove it works.
Make it reproducible.

Practise the engineering steps around your backend application.

01 Tests and diagnosis

JUnit and Mockito fundamentals, service tests, API integration checks, logs and debugging failed requests.

02 Tools and delivery

Git, Maven, profiles, environment variables and deployment configuration. Keep setup steps in a useful README.

HOW IT CONNECTS

BUILD → TEST → DEPLOY → VERIFY

PRACTICE / WHAT YOU WILL MAKE

Package the application, configure a deployment database and verify the main endpoints from documented steps.

PROJECTS + PORTFOLIO



Build a backend.
Explain the decisions.

Choose projects that demonstrate more than isolated syntax.

01

Project 01 / Management API

Students, employees or inventory with validation, CRUD, search, pagination and persistent data.

02

Project 02 / Commerce backend

Customers, products and orders with relationships, transactional operations and access-control practice.

HOW IT CONNECTS

REQUIREMENT → IMPLEMENT → TEST → DEMO

PRACTICE / WHAT YOU WILL MAKE

Deliver the repository, README, database setup, API collection and tests. Walk through one request and one failure case.

APPLIED LEARNING / EXAMPLE

See the idea in action.

Illustrative learning material, not a claim of actual campaign or project results.

A SMALL REST ENDPOINT

A controller receives an HTTP request and returns a response. A real project then adds service logic, validation and persistence.

```
@RestController
class HelloController {
    @GetMapping("/hello")
    String hello() {
        return "Hello, Java Backend!";
    }
}
```

REQUEST

GET /hello

RESPONSE BODY

Hello, Java Backend!

The example assumes a configured Spring Boot application and the required Spring Web imports. Extend it with a Student DTO and validated input.

TRAINING + INDUSTRY

Learn. Practise. Progress.

Clear roles for the training institute and the internship company.

01

Forsk Coding School / Training

Structured learning, guided exercises, reviewed projects and preparation for the skills required in your chosen course.

02

Forsk Technologies / Full-time internship

Progress into practical industry exposure after training. Discuss intake, role, working arrangements and internship terms during counselling.

HOW IT CONNECTS



PRACTICE / WHAT YOU WILL MAKE

Prepare for company interviews, review feedback, address gaps and practise for the next opportunity. Hiring decisions remain with each company.

FEES / INR

Clear module fees.
Plan your learning.

Fees supplied by Forsk Coding School.

Core Java	INR 6,500
Advanced Java	INR 8,000
Spring Boot + Hibernate	INR 8,000

TOTAL BACKEND FEE **INR 22,500**

Core Java + Advanced Java + Spring Boot and Hibernate. Complimentary SQL and NoSQL database training applies to Full Stack enrolment; confirm upgrade details separately.

YOUR NEXT STEP

Make a plan.
Build your future.

Discuss your goals and choose a course that matches your learning needs.


Java / OpenJDK


Spring


Hibernate



MySQL


Git

Share your goal

Talk about your background, interests and target skills.

Confirm the details

Review prerequisites, syllabus, delivery format and enrolment terms.

Start with clarity

Confirm fees and practical expectations before enrolling.

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