

Advanced Java (J2EE) + System Design Internship – 45 Days

Organized by: Groot Software

Level: Intermediate to Advanced

Focus: Backend development using Servlets, JSP, JDBC, and real-world System Design case studies

Internship Type: Project-based + Mentorship

Mode: Hybrid (Online / Offline in Jaipur)

Prerequisites

To join, the student must already know:

-  Core Java (OOPs, Collections, Exception Handling, File I/O)
-  Basic HTML/CSS
-  Basic SQL
-  Git & Eclipse or IntelliJ (optional but helpful)

Internship Objective

- Learn **J2EE backend fundamentals** using Servlets, JSP, JDBC
- Implement **real-world system design architectures**
- Understand **scalability, data modeling, APIs, user flows**
- Build real projects based on **product thinking**, not cloning

45-Day Internship Schedule

Phase 1: J2EE Foundation + MVC (Day 1–14)

Day	Topics
1	Overview of Java EE Architecture (Client ↔ Server ↔ DB)
2	Servlet Lifecycle, HTTP Methods (GET, POST)
3	Request/Response Handling, ServletContext & Config
4	Introduction to JSP (scriptlets, EL, directives)
5	JSP vs Servlet – when to use what
6	JavaBeans and Data Transfer between JSP & Servlet
7	MVC Architecture (Model-View-Controller) in Java
8	Session Management – Cookies vs HttpSession
9	Error Handling, Form Validation (server-side)
10	DAO Pattern, JDBC CRUD (Insert, Update, Delete, Read)
11	Connecting JSP/Servlet with MySQL (simple login system)
12-14	Mini Project (CRUD App with Login – Student Management or Blog Admin)

◆ Phase 2: System Design Case Studies (Day 15–35)

Each group picks ONE of the following **case studies** and solves it **from a software architecture point of view** (not a clone):

🔴 Options (Pick 1 Based on Skills & Interest):

- 1. Ola/Uber Backend System Design**
 - Booking flow, cab allocation algorithm
 - Real-time status update model
 - Database schema for ride, driver, user
 - Surge pricing logic (basic model)
- 2. Netflix/Hotstar Video Streaming System**
 - Role-based access (Admin, Viewer)
 - Content catalog, streaming simulation
 - CDN basics explanation
 - Recommendation logic outline
- 3. Reddit/Forum Design**
 - Nested comments, upvote/downvote system
 - Post lifecycle (create/edit/delete/archive)
 - User activity tracking
 - Moderation queue simulation

🔍 Case Study Implementation Flow

Day	Tasks
15–16	High-level design (UML, ER diagrams, DB Schema)
17–20	Designing system modules (Login/Auth, User panel, Admin panel)
21–25	Backend Implementation (Servlets, DAO, JDBC, JSP-based frontend)
26–29	Business logic, validation, error handling
30–32	Testing: SQL Queries, Servlet-JSP communication
33–35	Final Integration and Project Documentation

🔥 **Top 3 candidates** will be allowed to implement more complex versions or be mentored further for **research and freelance opportunities**.

◆ Phase 3: Final Review + Career Prep (Day 36–45)

Day	Topics
36	GitHub project upload & commit tracking
37-38	Documentation: README, diagrams, test cases
39-40	Final project presentation
41	Resume polishing for Java roles
42	Interview Preparation – DSA + Backend MCQs
43	Freelancing platforms & how to pitch Java backend work
44	Certification Day
45	Letter of Recommendation + LinkedIn Mentions for Top Students

Fee Details:

- **Registration Fee (Seat Confirmation): ₹500/- INR**
- **Remaining Internship Fee: ₹4,500/- INR**
- **Total Fee: ₹5,000/- INR**

Contact & Registration Details:

Phone: 9610967825

Registration Form:

<https://forms.gle/qcV62DSFFuUPsS5D7>

 **Payment Details for Seat Booking (Registration Fee ₹500/-):**



Scan & Pay Using PhonePe App



groot.software@ybl

Groot Software

Account Name: Groot Software
Account Number: 42104330019
IFSC Code: SBIN0032160
Bank: State Bank of India, Jaipur
Mansarovar Vijay Path Branch



Learn, Grow, Succeed!



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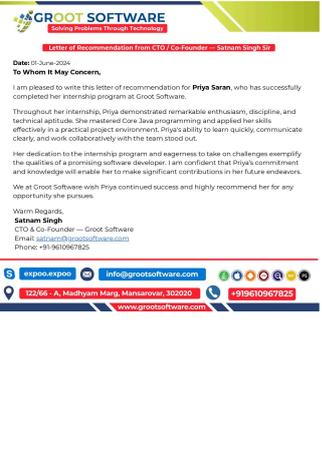
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After Payment of Registration Fee:

1. Upload a payment screenshot and fill in the basic details in the **Intern Onboarding Form:**
<https://forms.gle/RaYtk8Fun2TdKitt6>
2. The remaining fee of ₹4,500/- to be paid before or during the internship.

(Inclusive of certificate, mentoring, project support, and final assessment)

Deliverables:

 Offer Letter	 Certificate	 Letter of Recommendation By Mentor	 Letter of Recommendation By CTO
			

Item	Description
<input checked="" type="checkbox"/> Project	Console-based Java Project
<input checked="" type="checkbox"/> GitHub Profile	Project uploaded to GitHub
<input checked="" type="checkbox"/> Resume	Java Developer Resume (Fresher)
<input checked="" type="checkbox"/> Assessment	Final Evaluation + Feedback



Website Development

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UI/UX Design Services

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