

Application Flow & Role-Based Navigation Architecture

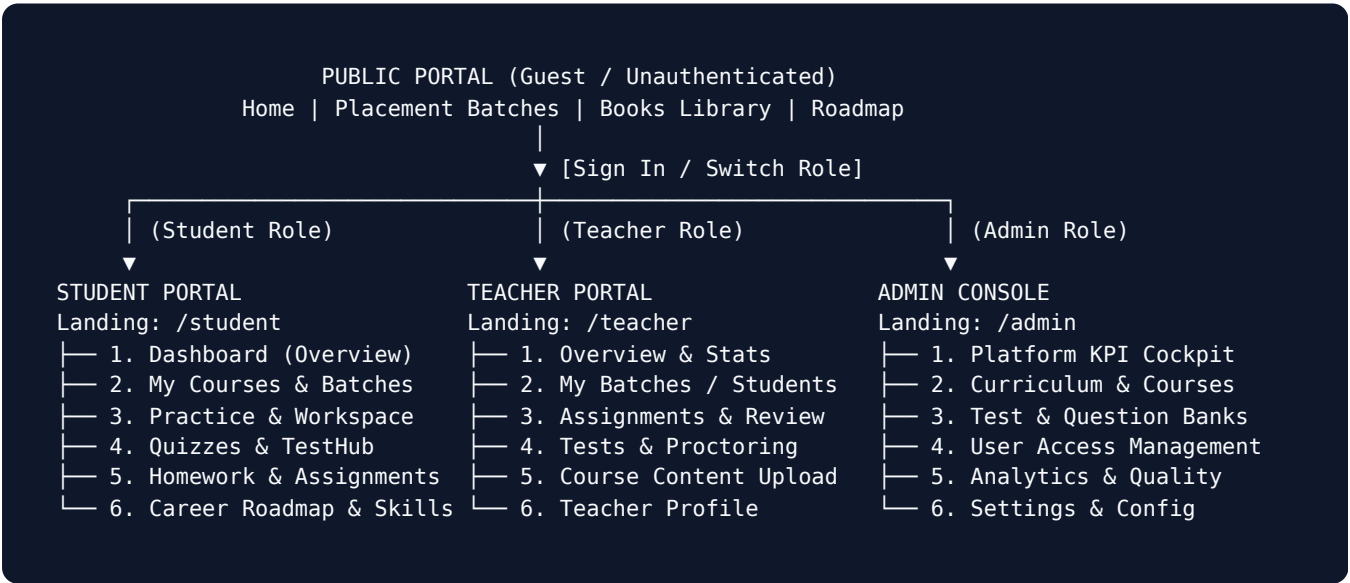
A comprehensive system blueprint resolving the application flow discontinuity across **Student**, **Teacher**, and **Administrator** roles.

1. Root Cause Analysis: Why the Flow Feels Broken

Current Diagnostic Findings:

- **Assessment Trap:** Upon logging in, students are routed directly to `/testhub`. The navigation switches entirely to test tabs (Quiz, Assignment, Practice Question, ELP, Workspace).
- **Missing Core Experience:** Students have no accessible **Home Dashboard**, **My Courses / Batches** view, or **Learning Material** navigation once inside the student portal.
- **Broken Mental Model:** TestHub is an assessment tool, not an entire learning portal. Students expect to see their enrolled subjects, daily curriculum, next live session, and resume learning actions.
- **Inconsistent Navigation Shells:** Public visitors see one navbar (Batches, Books, Roadmap, Reviews), whereas logged-in users enter a disconnected sub-portal with no bridge back to course exploration.

2. Master Architecture: Unified Multi-Persona Model



3. Student Persona: Flow & Navigation Matrix

First Screen on Login: `/student` (Personalized Student Command Center)

What the Student Dashboard Displays:

- **Continue Learning Card:** Direct 1-click action: *"Resume: Java Backend Batch - Chapter 4 (72% complete)"*.
- **Today's Action Items:** Pending assignments due, upcoming batch quiz, or scheduled mock test.
- **Skill Readiness & DSA Streak:** Daily problem-solving streak, readiness index for dream job roles.
- **Enrolled Batches Quick Access:** Jump into class notes, lecture videos, and batch community.

Nav Menu Item	Target Route	User Purpose & Page Contents
 Dashboard	<code>/student</code>	Central command center: enrolled progress, today's schedule, quick actions.
 My Courses	<code>/student/courses</code>	Enrolled placement batches, video lessons, chapter syllabus, books.
 Practice & IDE	<code>/testhub/workspace</code>	Interactive coding IDE, problem sets, algorithmic challenges.
 Quizzes & Tests	<code>/testhub</code>	Batch tests, timed exams, mock assessments, performance reports.
 Assignments	<code>/student/assignments</code>	Homework submissions, coding assignments, teacher grading & feedback.
 Career Roadmap	<code>/student/career</code>	Skill gap analysis, target company preparation path, placement readiness.
 Profile & Batch	<code>/student/profile</code>	Join Batch button, student settings, certificates, logout.

4. Teacher Persona: Flow & Navigation Matrix

First Screen on Login: `/teacher` (Teacher Command Center)

What the Teacher Dashboard Displays:

- **Active Batches Summary:** Total assigned students, active classes, batch attendance rate.
- **Pending Grading Counter:** Submissions waiting for review with a one-click "Grade Now" button.
- **Upcoming Assessments:** Quizzes scheduled to launch, active live tests needing monitoring.
- **Quick Action Toolbar:** `[+ Create Assignment]` , `[+ Schedule Test]` , `[+ Add Material]` .

Nav Menu Item	Target Route	Teacher Purpose & Actions
 Dashboard	<code>/teacher</code>	Executive summary, submission alerts, active batch KPIs.
 My Batches	<code>/teacher/students</code>	Student roster by batch, individual progress reports, attendance.
 Assignments	<code>/teacher/assignments</code>	Create assignments, review GitHub/code submissions, assign marks & feedback.
 Tests & Quizzes	<code>/teacher/tests</code>	Publish tests, set time limits, monitor integrity and live attempts.
 Curriculum Notes	<code>/course</code> (Trainer View)	Upload lesson notes, slides, recommended reading material.
 Profile & Settings	<code>/teacher/profile</code>	Teacher credentials, subject specialties, office hours, logout.

5. Admin Persona: Flow & Navigation Matrix

First Screen on Login: `/admin` (Platform Administration Cockpit)

What the Admin Dashboard Displays:

- **Platform KPIs:** Active students, active batches, tests submitted today, platform uptime.
- **Integrity & System Flags:** Assessment cheating alerts, suspicious attempt flags, system logs.
- **Platform Controls:** Course authoring, question bank imports, role permissions.

Admin Category	Target Route	System Purpose
Executive Cockpit	/admin	High-level system health, user metrics, real-time activity feed.
Course Management	/admin/courses	Create, publish, and edit batches, courses, and book library chapters.
Question Bank	/admin/questions	MCQ repository, coding challenge test cases, bulk JSON/CSV imports.
Test Integrity	/admin/assessments	Exam scheduling, attempt replays, proctoring violation reports.
User Operations	/admin/students	User role assignment, batch enrollment management, password resets.
Career & Skills	/admin/career	Role benchmarks, skill taxonomy management, hiring partner alignment.

6. End-to-End User Journey Scenarios

Scenario A: Student Daily Flow

- 1. Student logs in → Lands on /student .
- 2. Clicks "Resume Java Chapter 4" in /student/courses .
- 3. Completes video & notes → Clicks "Practice Coding Problem".
- 4. Editor opens in /testhub/workspace → Runs code tests.
- 5. Submits code → Returns to Dashboard; readiness score ticks up!

Scenario B: Teacher Assessment Flow

- 1. Teacher logs in → Lands on /teacher .
- 2. Notified: "18 homework submissions ready".
- 3. Clicks to open /teacher/assignments/[id]/submissions .
- 4. Scores student code, adds comments → Clicks Save.
- 5. Clicks + Create Test → Publishes test to "Batch 2026-A".

7. Architectural Implementation Checklist

- **1. Fix Post-Login Redirection:** Update `/app/login/page.tsx` and `AuthModal.tsx` so students redirect to `/student` (NOT `/testhub`).
- **2. Enhance Student Header:** Update `StudentNavbar.tsx` to include `Dashboard` and `My Courses` as the primary tabs.
- **3. Reposition TestHub:** Treat TestHub as an assessment module accessible from the main student flow, rather than an isolated standalone site.
- **4. Public to Auth Bridge:** In the public header `Navbar.tsx`, when a user is signed in, show a direct button: *"Go to My Learning Dashboard"*.