

Project Title: Learnity

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Introduction to Project

- In Sindh, Pakistan, there is a growing need for a localized e-learning platform aligned with the Sindh Board curriculum. While international platforms like Khan Academy and Coursera, and local platforms in Pakistan, support online learning, they are mostly designed for international audiences, O-Level students, or higher education. As a result, students from grades 1 to 12 following the Sindh Board lack a dedicated digital learning solution.
- This project addresses this gap by providing a structured, curriculum-based tutoring website that connects teachers and students from both urban and rural areas. The platform offers guided and well-organized online learning, enabling teachers to share their expertise effectively while helping students continue their education with proper support and clear academic direction.

Project Overview

- ❑ **Learnity** is a web-based e-learning platform tailored for Sindh Board students (Grades 1–12)
- ❑ Designed to bridge the gap between traditional education and modern digital learning
- ❑ Provides a structured, localized, and curriculum-aligned online learning environment
- ❑ Offers centralized access to course materials, video lectures, and academic resources
- ❑ Supports teacher–student interaction and collaboration through organized digital tools

Project Overview Continued...

- ❑ Students can search courses, and rate tutors by subject and grade.
- ❑ Study groups enable chat, video calls, and resource sharing via chat rooms.
- ❑ Gamification system rewards users with xp points and badges.
- ❑ Admin approval ensures only qualified tutors join the platform.
- ❑ Learnity bridges education gaps in Pakistan affordable, accessible, localized learning.
- ❑ Aims to improve educational reach and consistency across the Sindh province.

Literature View

- Several e-learning platforms such as Khan Academy, Coursera, and Preply provide online tutoring and educational resources. However, these platforms often focus on international curricula and are too costly for students in Pakistan.
- Research by Memon et al. (2021) highlights that tools like WhatsApp were used for learning during COVID-19, but they lack structure, teacher verification, and progress tracking. Studies on gamification in education (Hamari, 2023) show that reward-based learning improves student motivation and consistency.

Literature View Continued...

- Learnity builds upon these findings by offering a localized, affordable, and unified platform that integrates verified tutoring, study groups, and gamified progress tracking for Pakistani students. .

Similar Projects

- ❑ **Khan Academy** – Offers free lessons but not 1-on-1 tutoring or Pakistan's syllabus.
- ❑ **Coursera** – High-quality but costly; targets higher education.
- ❑ **Preply** – Private tutoring but expensive and not fit for local market.
- ❑ **IlmKiDunya** – Covers local syllabus but lacks live tutoring and gamification.

Problem Identification/Statement

□ Problems:

- Students struggle to find qualified tutors, especially in remote areas.
- International platforms charge \$15-25/hour, unaffordable for most students.
- Study resources scattered across WhatsApp, YouTube, and PDFs with no proper organized way.
- WhatsApp groups lack structure, verification, and progress tracking.
- Most platforms don't support Pakistani curriculum.

Problem Identification/Statement

□ Solution (Learnity):

- Verified tutor marketplace with affordable and accessible pricing.
- Structured study groups with chat & video features.
- Curriculum-specific content aligned with Matric/FSc boards.
- One to one video lectures with teacher and student
- Notes and books provided and kept in a structured way
- Study material focused on Sindh Board Curriculum

Scope of Project

- ❑ **Platform for Web(Next.js)**
- ❑ **Targeted Audience:** Students and Teachers
- ❑ **Features include:**
 - Student: Search tutors, book online sessions with teacher, browse courses, buy courses,
 - Tutor: Create profile, set pricing, conduct video sessions, create courses
 - Admin: Approve tutors, manage users (can ban/unban users), manage system configurations, monitor audit logs, can access other roles.

Aim & Objectives

□ **Aim:**

- Build an accessible platform connecting Pakistani students with verified tutors and study groups, aligned with local curriculum.

□ **Objectives:**

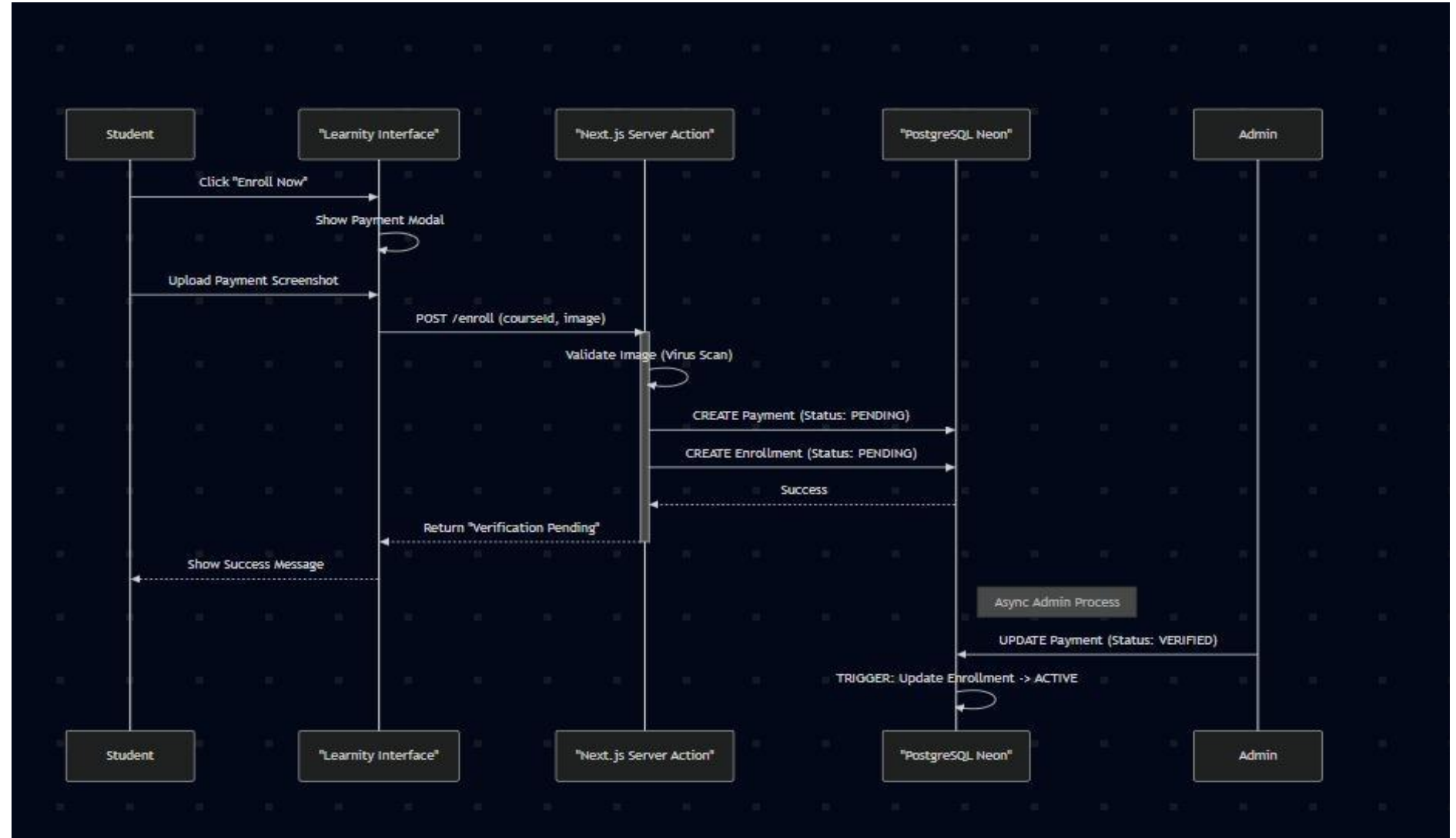
- Develop tutor-student matching and booking system.
- Create study group features.
- Build curriculum-aligned resource library.
- Implement bilingual interface (Urdu + English).
- Integrate video calling for sessions.

Tools & Technologies

- ❑ **Frontend:** Nextjs 16, Zustan, framer-motion & Tailwind with Shadcn
- ❑ **Backend:** Nextjs api routes, Firebase, Prisma(ORM)
- ❑ **DataBase:** Neon DB (PostgreSQL)
- ❑ **Communication:** GetStream, 100ms video SDK
- ❑ **Design Tools:** Figma + Stitch
- ❑ **Version Control:** Git + Github, Github actions (CI/CD)
- ❑ **Deployment:** Vercel (Hosting and deployment)
- ❑ **Other tools:** Antigravity (IDE), Postman, github desktop, gemini cli.

Design & Development Methodologies

Activity diagram:



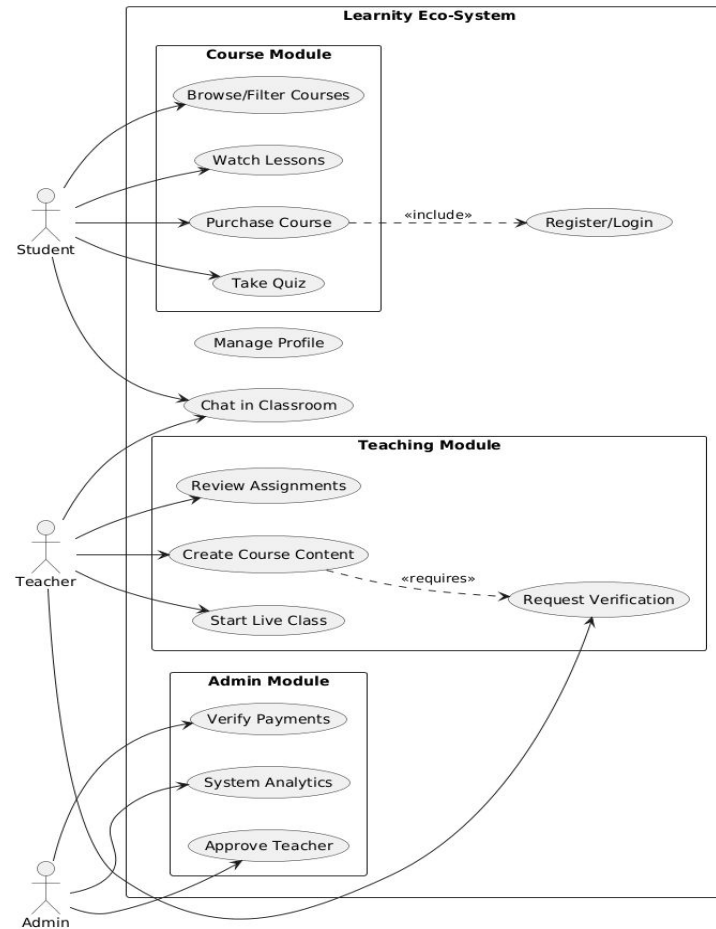
Design & Development Methodology

□ Agile Development Model:

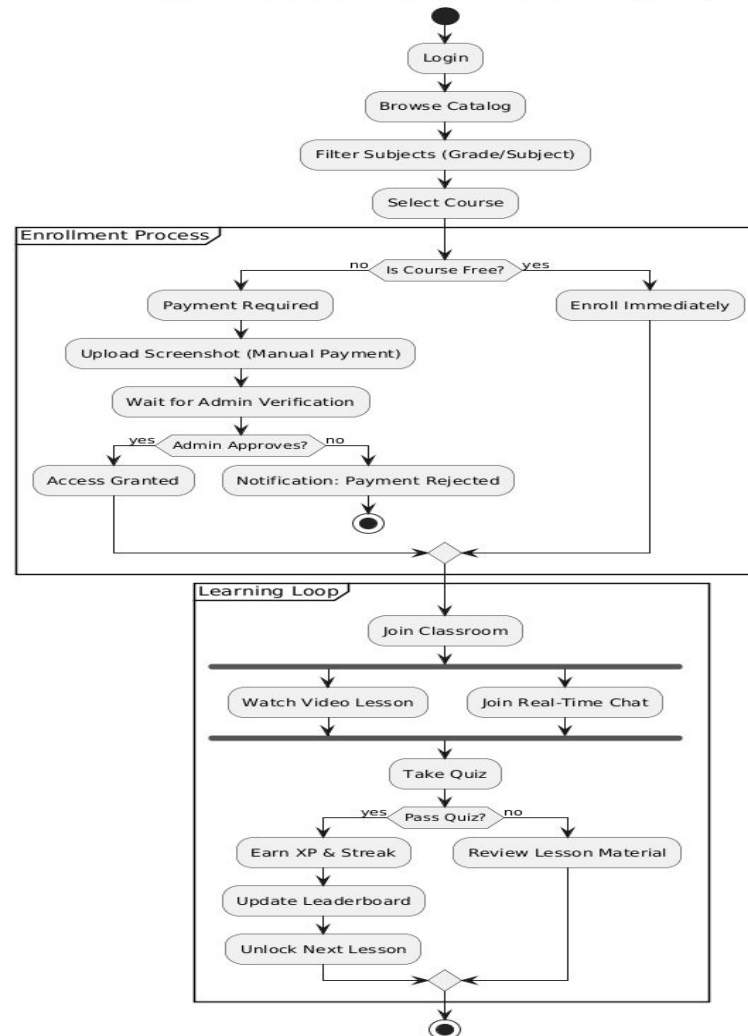
- Short sprints: plan, code and test.
- Continuous feedbacks & improvements.
- Flexible, user-focused, quick updates



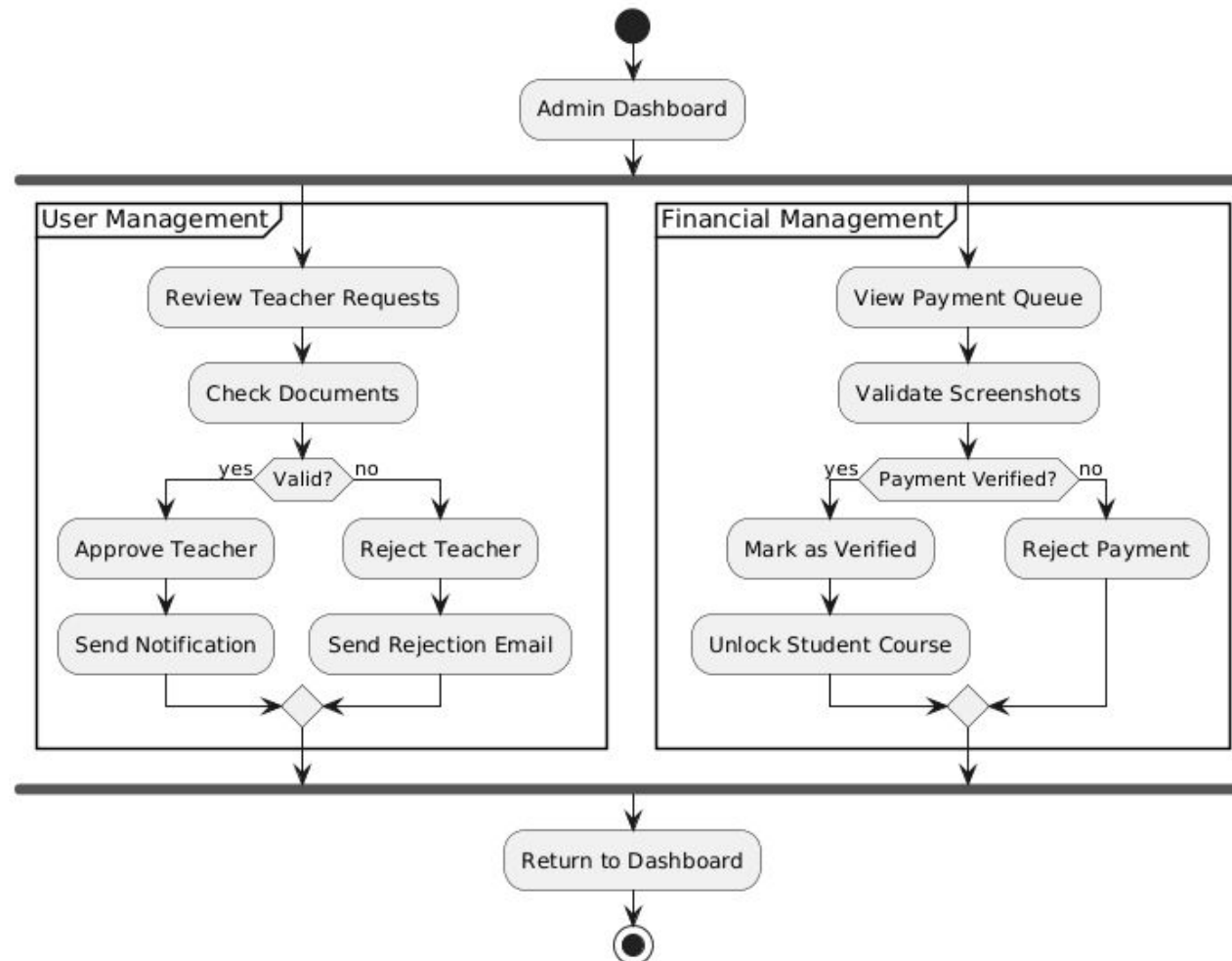
User case Diagram across software



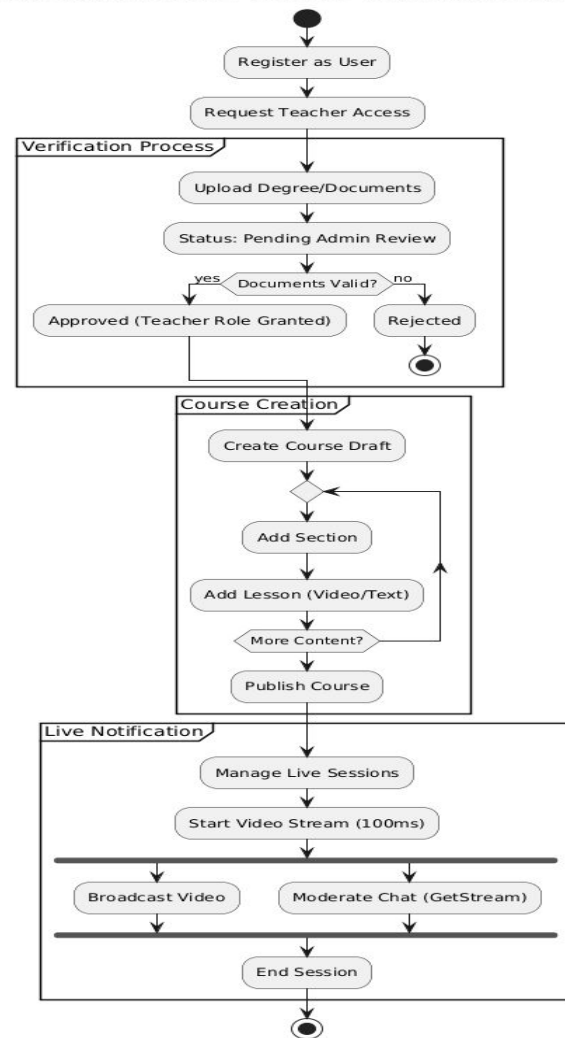
Student's Activity Diagram



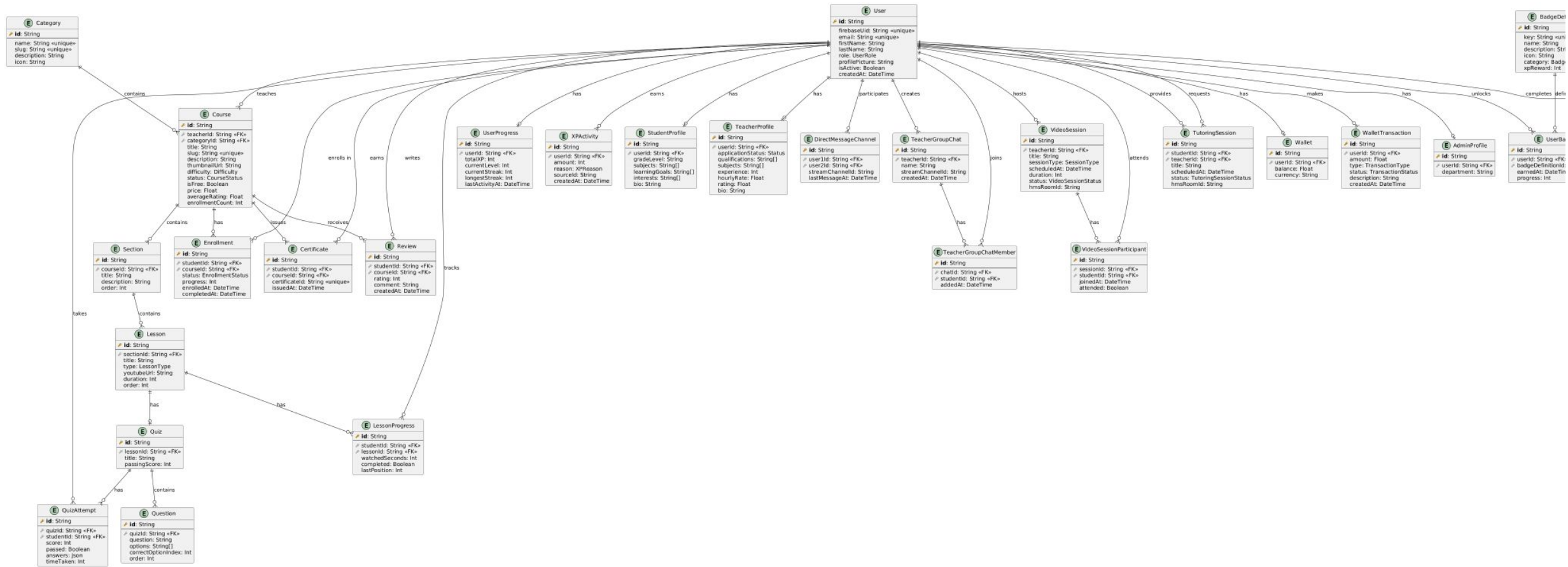
Admin's Activity Diagram



Teacher's Activity Diagram

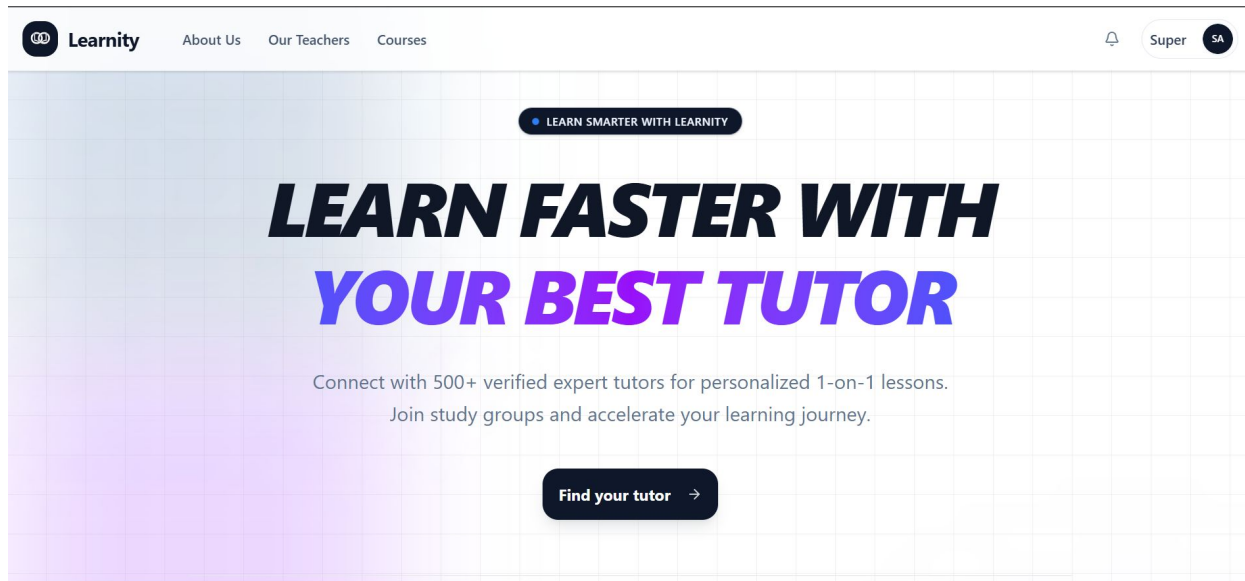


Entity Relation Diagram

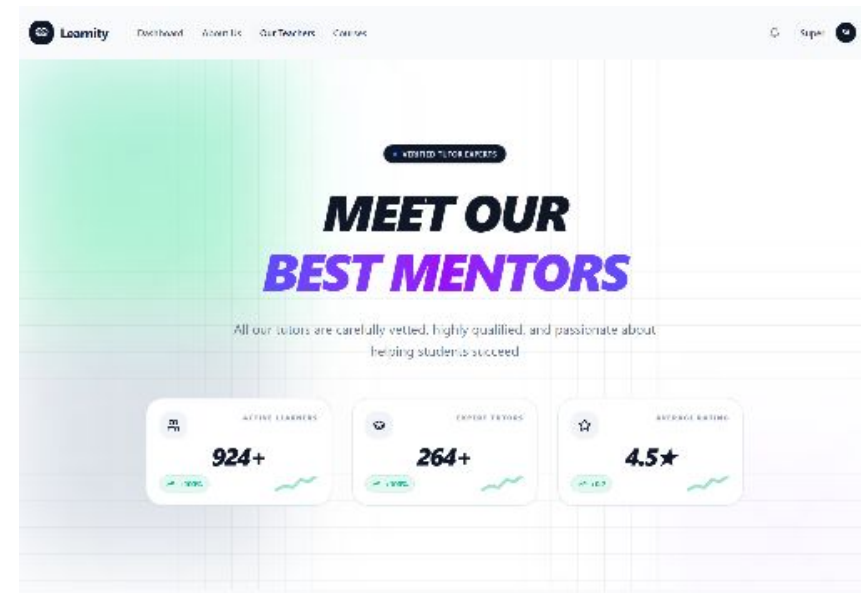


Implementation

Landing page

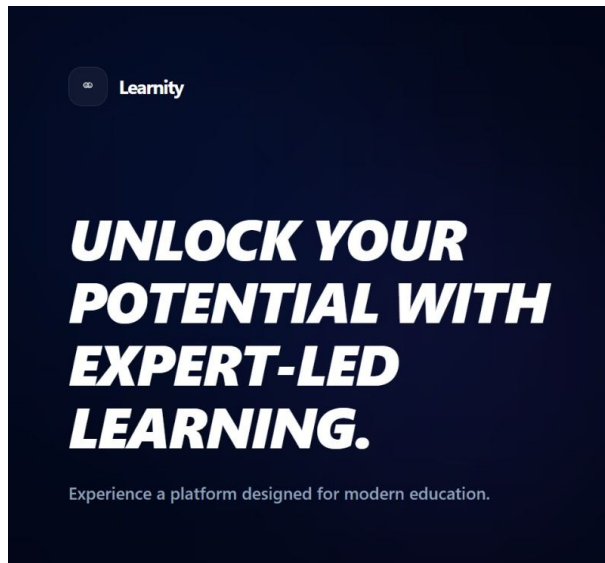


Teacher Page




Login page and role selection

User sign up page




← Back to Home

 CONTINUE WITH GOOGLE



BECOME A TEACHER >

OR CONTINUE WITH EMAIL

Email Address

 Enter your email

Password

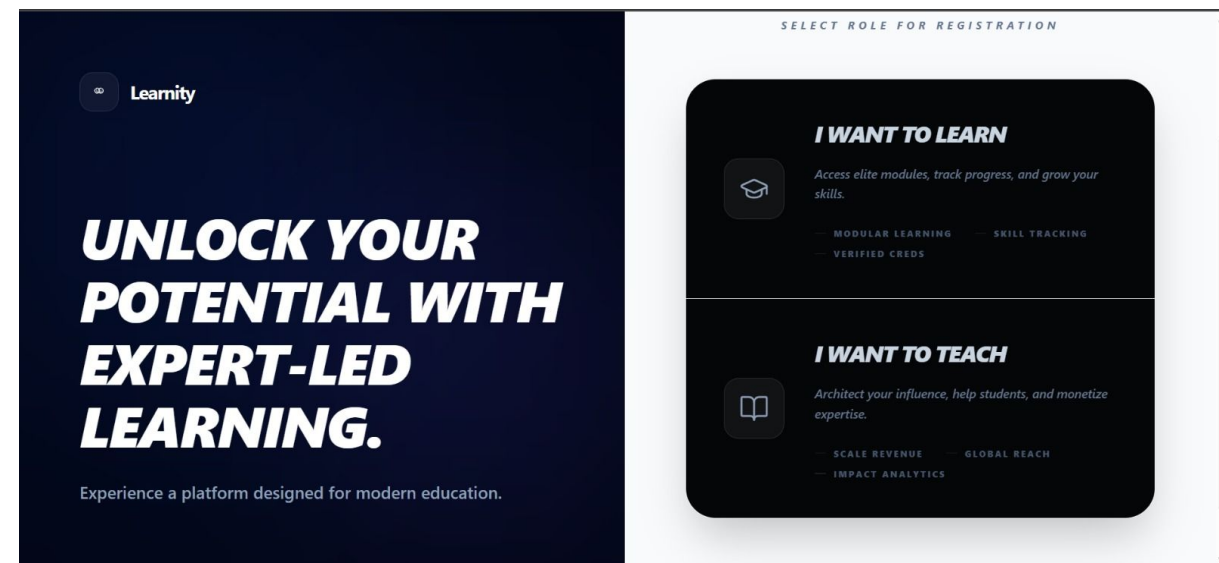
 Enter your password 

☐ Remember me [Forgot password?](#)

SIGN IN

Don't have an account? [Sign up here](#)

Role selection page



Registration pages

Student Registration page

[← Back](#)

Student Registration

Create your student account to start learning

Personal Information

First Name
Enter your first name

Last Name
Enter your last name

Email Address
Enter your email address

We'll send a verification email to this address.

Security

Password
Create a strong password

Must contain uppercase, lowercase, number, and special character

Confirm Password
Confirm your password

Academic Information


Grade Level
Select your grade level

Subjects of Interest
Select the subjects you're interested in learning (choose at least one)

<input type="checkbox"/> Mathematics	<input type="checkbox"/> Science	<input type="checkbox"/> English
<input type="checkbox"/> History	<input type="checkbox"/> Geography	<input type="checkbox"/> Physics
<input type="checkbox"/> Chemistry	<input type="checkbox"/> Biology	<input type="checkbox"/> Computer Science
<input type="checkbox"/> Art	<input type="checkbox"/> Music	<input type="checkbox"/> Physical Education
<input type="checkbox"/> Foreign Languages	<input type="checkbox"/> Economics	<input type="checkbox"/> Psychology
<input type="checkbox"/> Philosophy	<input type="checkbox"/> Literature	<input type="checkbox"/> Statistics

☐ I agree to the [Terms of Service](#) and [Privacy Policy](#)

☐ I am human

 hCaptcha
Privacy - Terms

Loading...

Teacher Registration page

Learntivity

[Sign In](#)

Become a Teacher

Step 1 of 3

Progress

33%

Let's get to know you

Basic information to create your account

First Name *

John

Last Name *

Doe

Email Address *

john.doe@example.com

We'll send important updates to this email

Password *

Create a strong password

Confirm Password *

Confirm your password

Country *

Select your country

Phone Number

+1234567890

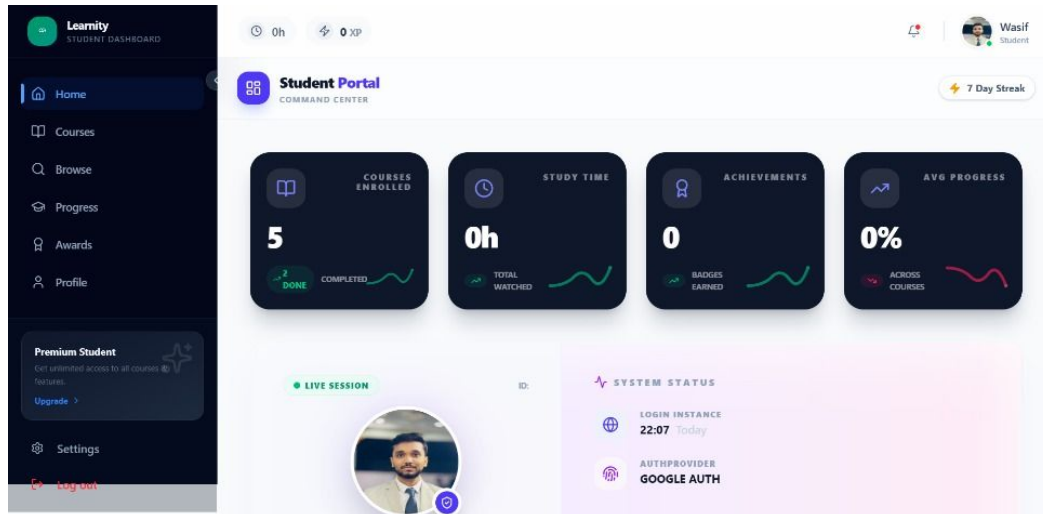
Include country code (optional)

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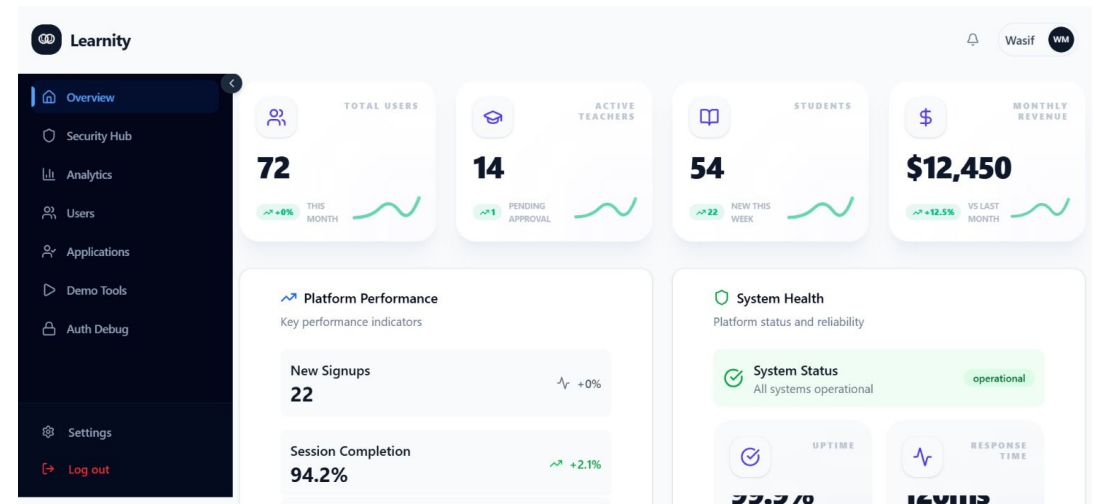
[Next](#)

Dashboard pages

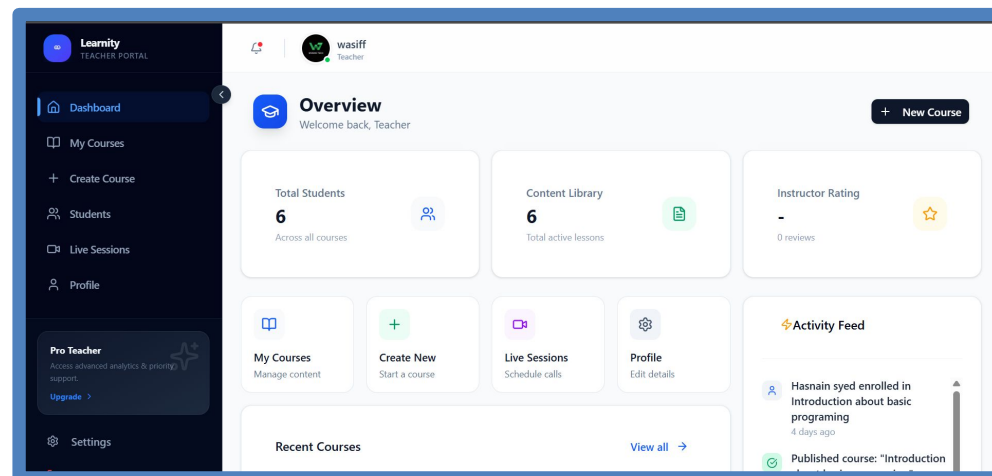
Student dashbaord



Admin Dashbaord

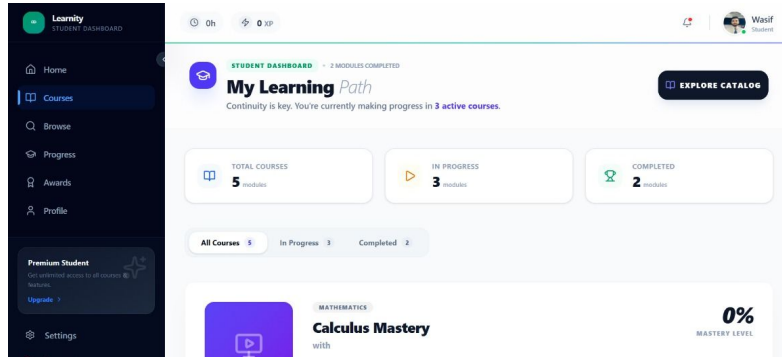


Teacher Dashbaord

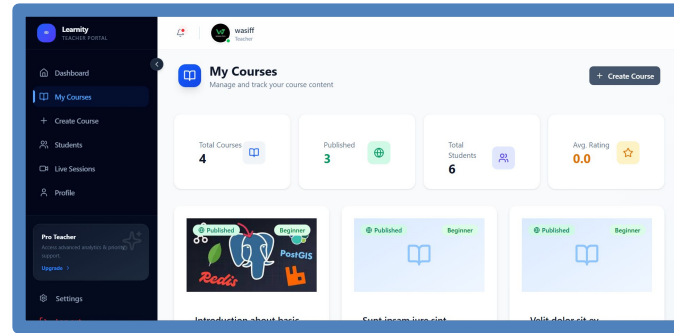


Courses Section

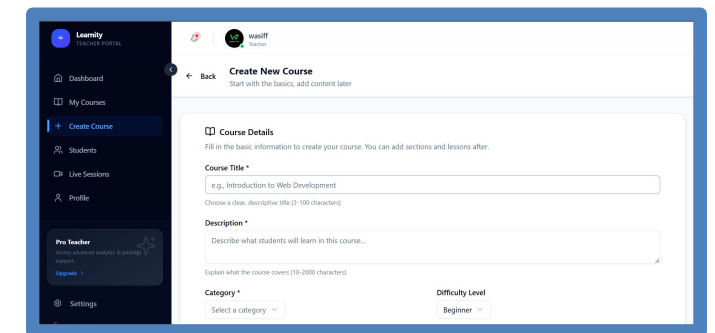
Student Learnings Page



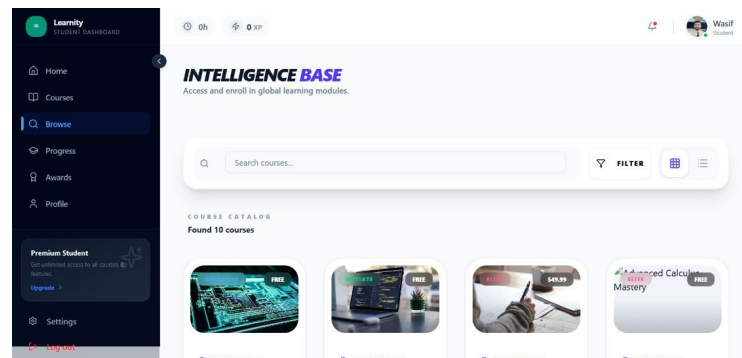
Teacher's courses



Create Courses



Browser Courses

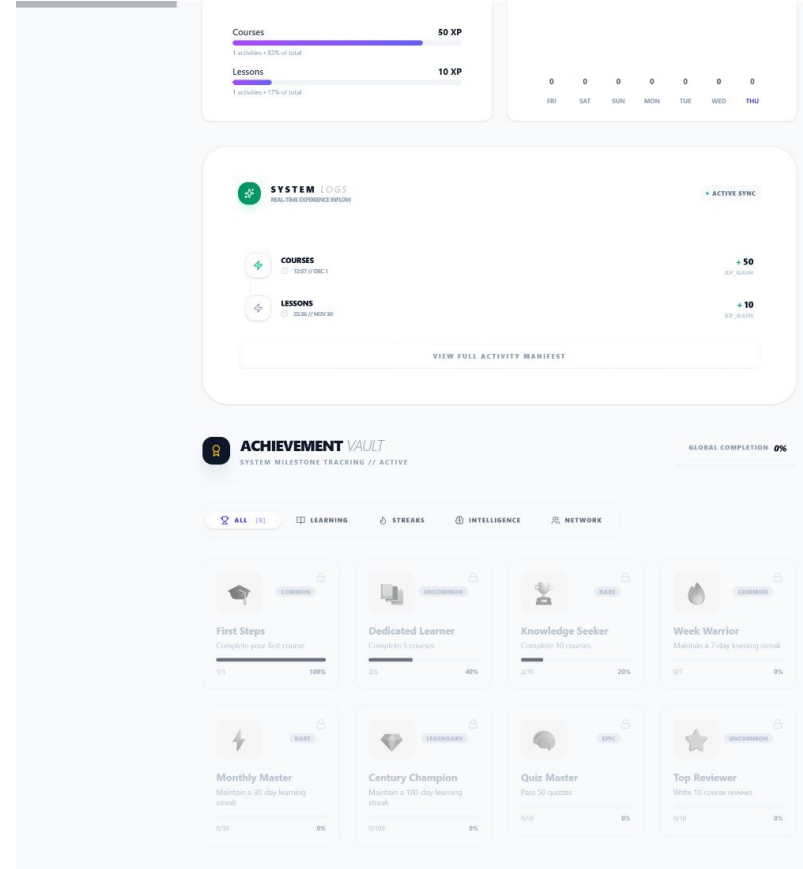
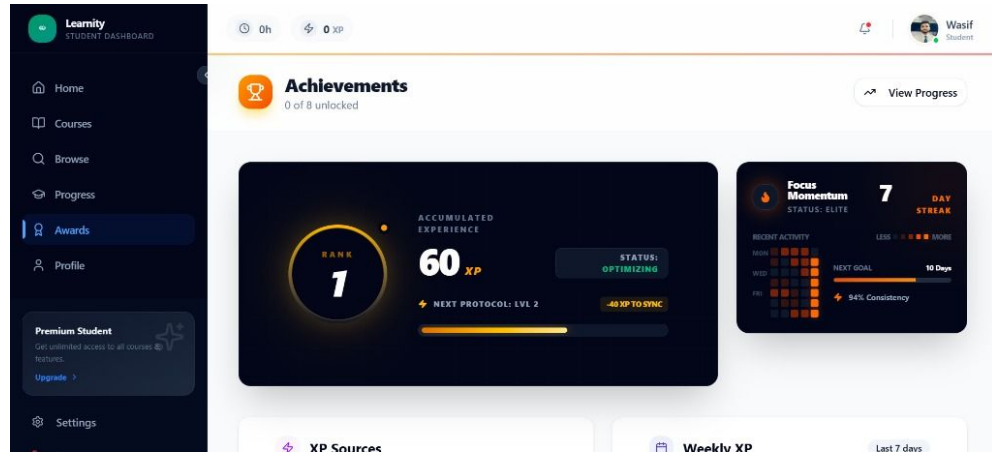


Student Progress



Student Gamification & reward system

Student Awards Page



User Profile Pages

Student Profile

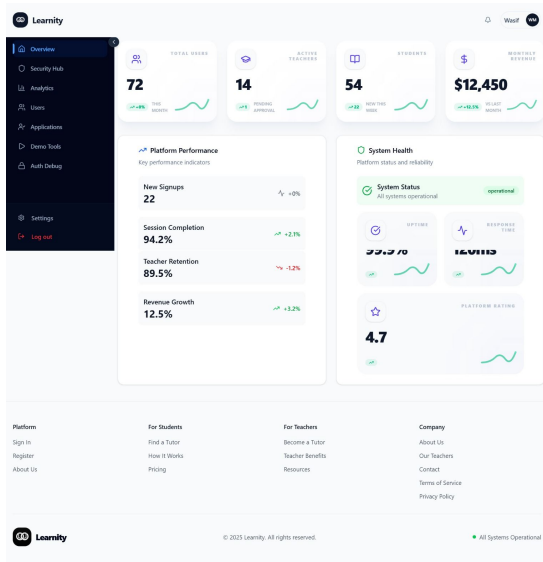
The screenshot shows a mobile app interface for a student profile. On the left is a dark sidebar with navigation options: Home, Classes, Browser, Progress, Assignments, Profile (selected), Premium Student, and Settings. The main content area is titled 'PROFILE MATRIX' and includes three progress cards: 'ACADEMIC FOCUS' (5 subjects), 'COURSE BOARD' (5 assignments), and 'PROGRESS OVERVIEW' (100% complete). Below these is a profile card for 'WASIF MALIK' with a profile picture and a 'VIEW INFO' button. The 'ACADEMIC PROFILE' section contains a 'Basic Information' form with fields for first and last names, grade level, and a 'SAVE CHANGES' button. It also includes an 'About Me' section, 'Subjects I Study' (with checkboxes for various subjects), 'Study Style' (with checkboxes for different study methods), and 'Interests' (with a text input and a plus button).

Teacher Profile

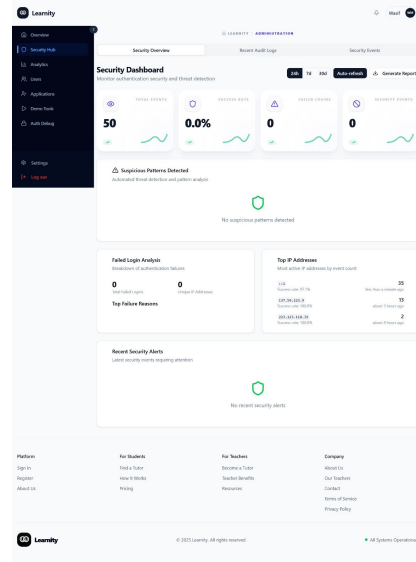
The screenshot shows a desktop web interface for a teacher profile. On the left is a dark sidebar with navigation options: Dashboard, My Courses, Create Course, Students, Live Sessions, Profile (selected), and Settings. The main content area is titled 'Edit Profile' and includes a progress bar showing '70% Completed' and a 'View Public' button. The profile card for 'wasiff Teacher' is at the top. Below it are three tabs: 'Identity & Brand' (selected), 'Expertise & Docs', and 'Logistics & Info'. The 'Identity & Brand' section includes a 'Profile Image' area with an 'IDENTITY VISUALIZER' and a 'Pro Teacher' badge. The 'Basic Information' section contains fields for 'First Name' (wasiff) and 'Last Name' (Malik...). The 'Professional Headline' section has a text input with the placeholder 'e.g. Senior Math Tutor with 5 years experience'. The 'About Me (Bio)' section has a text area with the placeholder 'i am just really good at teaching duh i am just really good at teaching duh i am just really good at teaching duh ...'.

Admin Portal

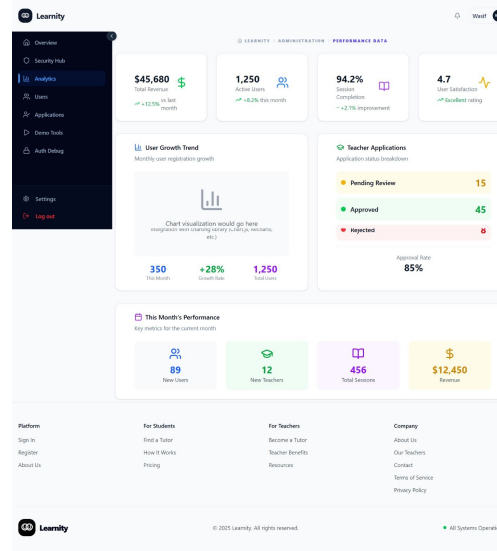
Admin Dashboard



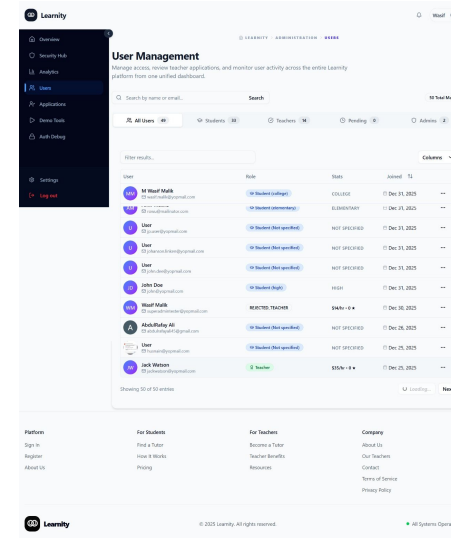
Audit logs



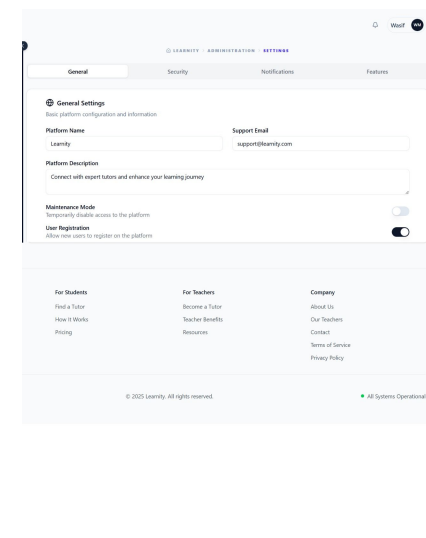
Analytics



User management



System Settings



Conclusion and Result

CONCLUSION:

The "Digital Divide" in Pakistan is not just about a lack of internet; it is about a lack of relevant content. Learnity fills this void. This project has taught us that building an EdTech platform is not just about writing code; it is about understanding user psychology. By integrating real-time video (100ms) and chat (GetStream), we transformed a static website into a thriving community. The platform provides easy navigation, secure authentication, and a scalable database structure that can grow with the user base. Most importantly, Learnity demonstrates that high-quality educational infrastructure can be built on a student budget using modern "Serverless" technologies, providing a blueprint for future digital sovereignty in Pakistan's education sector.

□ **Lesson Learned:**

- Database design for multi-role applications using postgresql.
- Team collaboration using Agile methodology.
- Importance of planning and clear requirements.
- The value of feedback and iteration in building better solutions.
- Working on monolithic architecture.

References

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Thank you