

LearnHub

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1. INTRODUCTION

LearnHub is a web-based learning management system designed for Students, Teachers, and Admins. It provides a personalized dashboard to each role, enabling course management, progress tracking, and content interaction in a user-friendly environment.

The platform aims to simulate a real-world educational portal, enhancing the learning experience through organized course structures, seamless navigation, and role-based access.

2. IDEATION PHASE

Problem Statement:

Traditional e-learning portals lack dynamic role-based dashboards and intuitive UI for all user types. LearnHub bridges this gap with a clean, fully functional platform.

Empathy Map Canvas:

- Users: Students, Teachers, Admins
- Needs: Easy login/register, role-specific dashboards, smooth navigation, visual feedback
- Pains: Confusing interfaces, non-intuitive design, role conflicts
- Gains: Simplified course access, attractive design, real website behavior

Brainstorming:

User flows: Landing -> Register/Login -> Role Dashboard -> Course View

3. REQUIREMENT ANALYSIS

Customer Journey Map:

1. Visit Landing Page
2. Register or Login
3. Redirected to respective Dashboard
4. Access Courses
5. Logout

Solution Requirements:

Frontend: HTML, CSS, JS

Backend: Java (Spring Boot)

Database: MySQL

Auth, Role Management, Course Display, Routing

Technology Stack:

HTML, CSS, JS, Spring Boot, MySQL

4. PROJECT DESIGN

Problem Solution Fit:

Role-based LMS to ease learning.

Proposed Solution:

Separate dashboards, login/register flow, and modern UI.

Solution Architecture:

Frontend communicates with backend APIs, fetches role-specific data, and renders dynamic content accordingly.

5. PROJECT PLANNING & SCHEDULING

Week 1: Requirement Gathering

Week 2: Frontend Setup

Week 3: Backend Integration

Week 4: Role-based Routing

Week 5: UI Enhancements

Week 6: Testing and Final Touches

6. FUNCTIONAL AND PERFORMANCE TESTING

Load Testing with up to 100 users

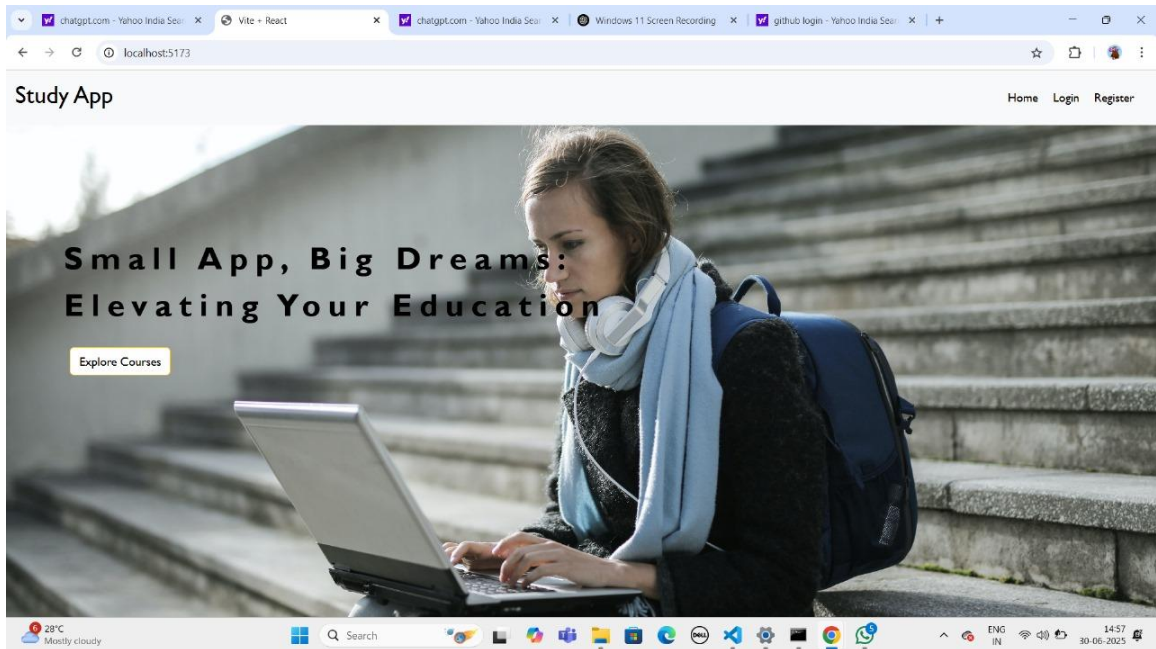
Navigation tested across all roles

Course rendering speed evaluated for responsiveness.

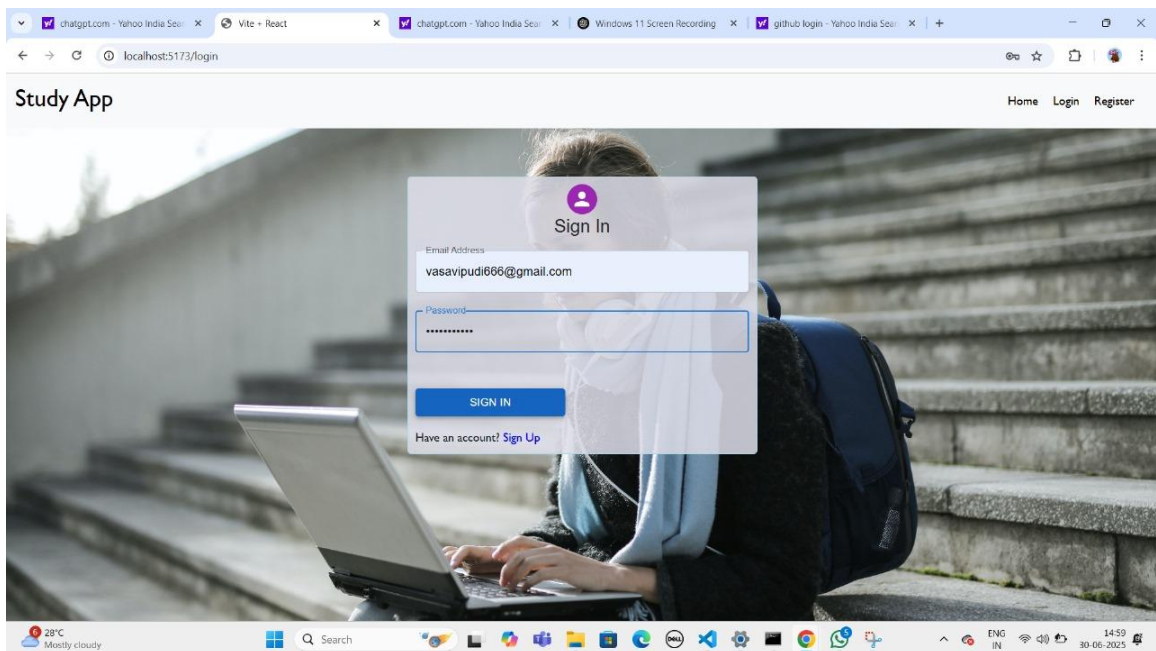
7. RESULTS

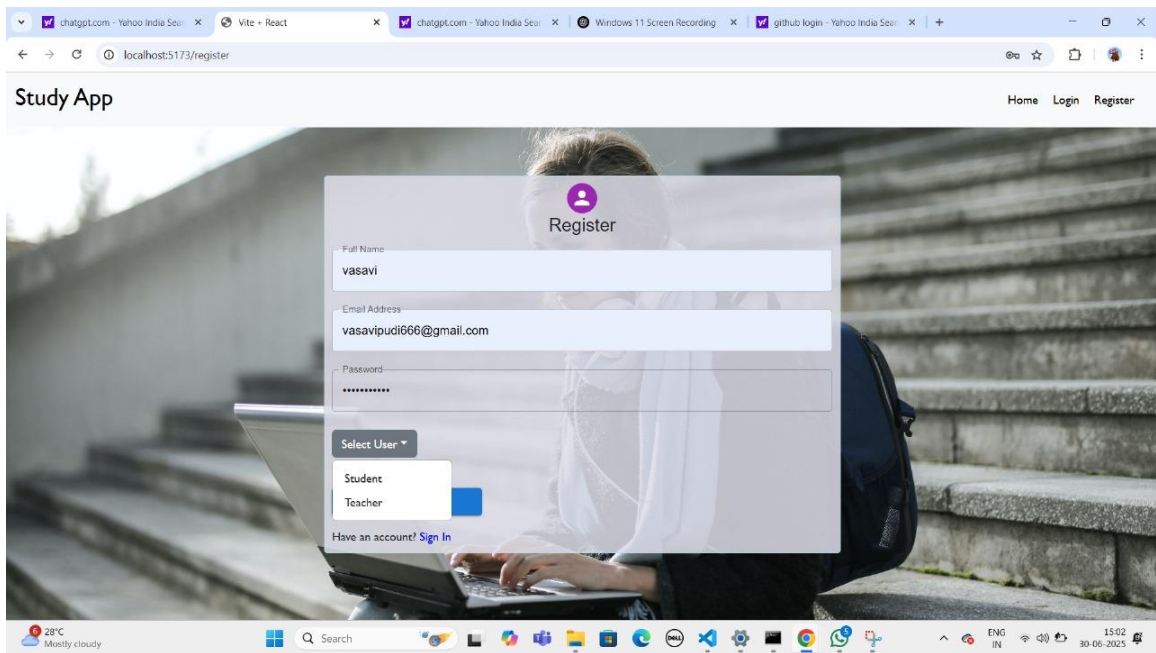
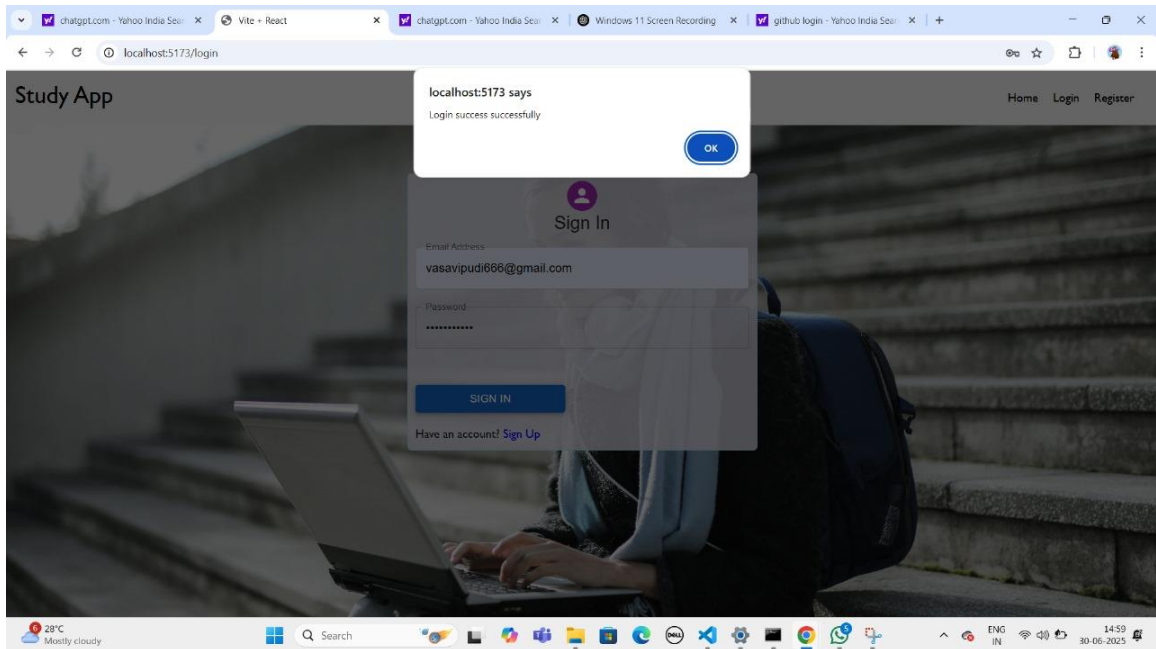
Screenshots:

- Landing Page

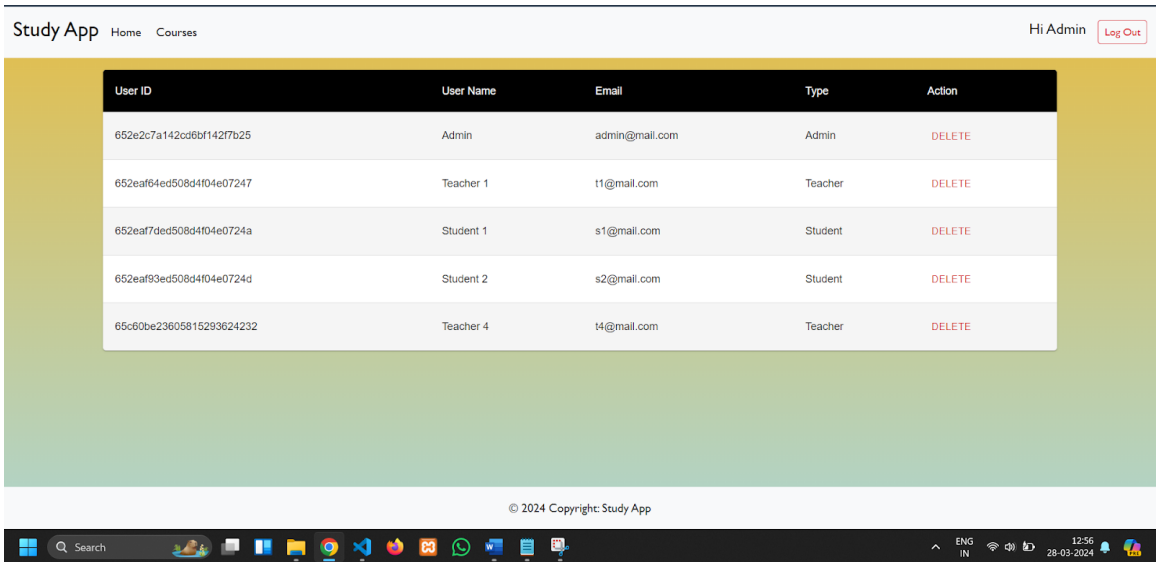
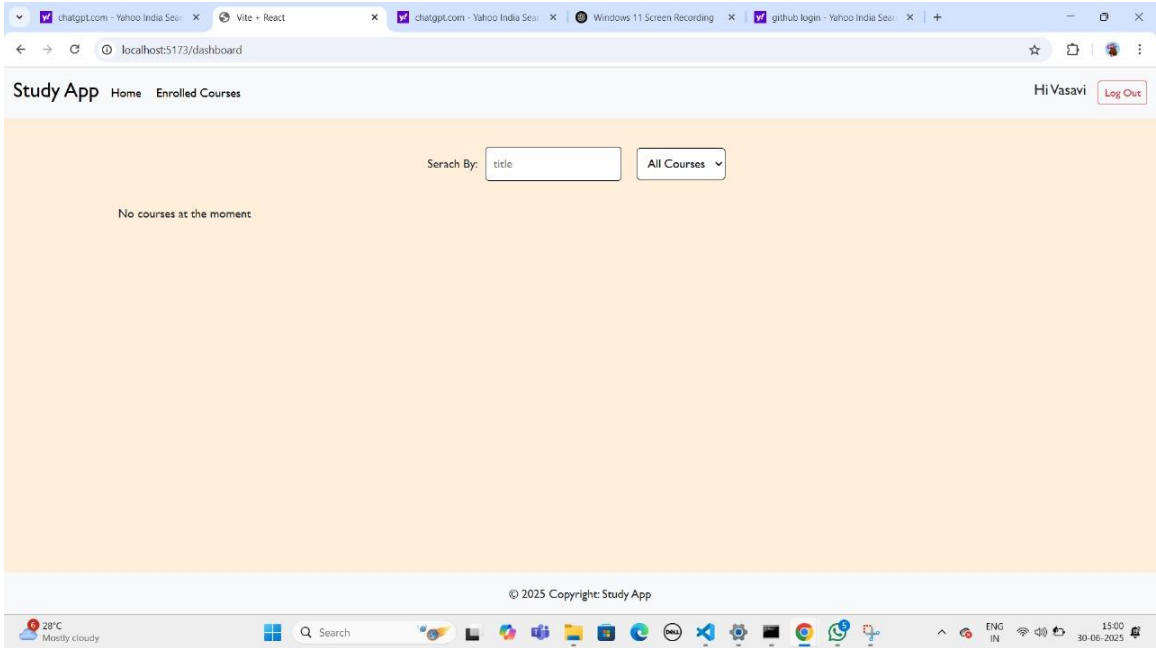


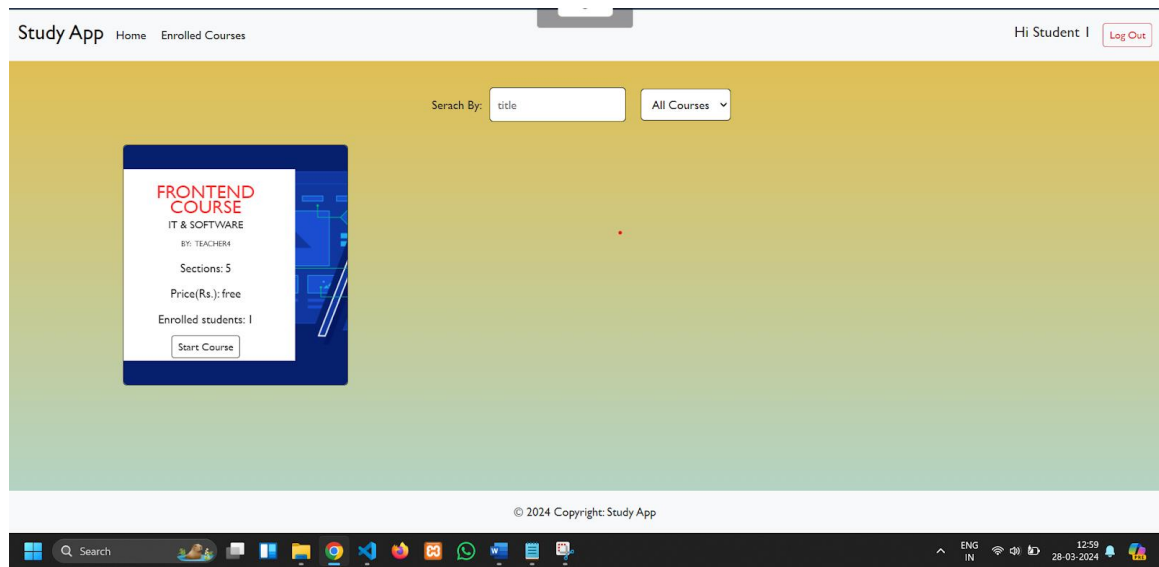
- Login/Register Page





- Course View Page





8. ADVANTAGES & DISADVANTAGES

Advantages:

- Role-based experience
- Intuitive UI
- Scalable

Disadvantages:

- No real-time messaging
- Admin lacks analytics

9. CONCLUSION

LearnHub simulates a real-world educational website with role-based access and functional navigation.

10. FUTURE SCOPE

- Real-time chat
- Analytics
- Certificate generation
- Mobile-friendly UI

11. APPENDIX

Demo :

[<https://github.com/vasavi666/smartbridgeProject/blob/main/demovideo.mp4>]

GitHub : [<https://github.com/vasavi666/smartbridgeProject>]