Master Team Project Summer 2024

"Eduly"

Milestone 2

Team 2

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Ammar Ansari	Frontend Lead

Date: 02.06.2024

Date Submitted	Date Revised
02.06.2024	

Functional Requirements

Priority 1

The app should allow an administrator to:

- 1. View the list of tutor profiles pending approval.
- 2. Approve tutor profiles before going live.
- 3. View the list of all the tutors, students, and all the content uploaded by them including images, forum Q&A, and other documents.
- 4. Delete inappropriate content or users.

The app should allow a **visitor** to:

- 5. View the home page (with listed tutors and their info).
- 6. Register as a tutor or a student with their Fulda University email address.

The app should allow a **student** to:

- 7. Log in to the application.
- 8. Search for tutors based on various parameters such as pricing, ratings, availability (days of the week, hours), topic, language of instruction, and experience.
- 9. Sort the tutors based on pricing, ratings or popularity.
- 10. View the introductory video of the tutor.
- 11. Book a free trial session by selecting the date and time.
- 12. Send/read messages to/from a tutor.
- 13. Buy further tutor sessions.
- 14. Write a review & rate the tutor.
- 15. Delete their student profile.

The app should allow a **tutor** to:

- 16. Log in to the application.
- 17. Create a profile with all the necessary information like topics, schedule, experience, CV, intro/teaser video.
- 18. View upcoming tutoring or trial session appointments.
- 19. Send/read messages to/from a student.
- 20. Delete their tutor profile.

The app should allow **students and tutors** to:

- 21. Ask questions in the community forum.
- 22. Answer others' questions.

Priority 2

The app should allow an administrator to:

- 1. Search students / tutors by name.
- 2. Block offenders from re-registering on the website.

The app should allow a **tutor** to:

- View the number of students registered for each topic and session and other insights.
- 4. Reschedule or cancel sessions.

The app should allow students and tutors to:

- 5. Participate in a video conference directly from the website.
- 6. Receive in-app reminders/notifications of their upcoming meetings.
- 7. Live chat with each other.
- 8. Upvote others' answers or questions.
- 9. Edit their questions or answers.

Priority 3

The app should allow a **student** to:

- 1. Set preferences for topics and other parameters mentioned below.
- 2. View recommended tutors/topics on the home page.
- 3. Book and attend offline tutoring sessions.

The app should allow a **tutor** to:

4. Post file/video content (assignments/study material). (P3) Note: This is P3 since it also involves controlling who can access the content uploaded and classifying content as study material or assignments. Things like whether the content should be accessible to the entire group or a single student in a 1:1 session must be considered.

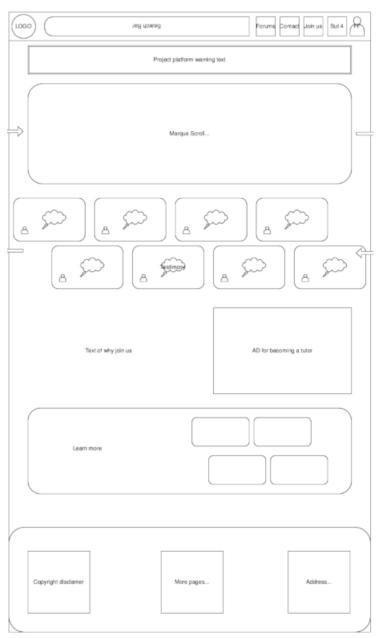
5. Make a private forum for only their students. (P3)

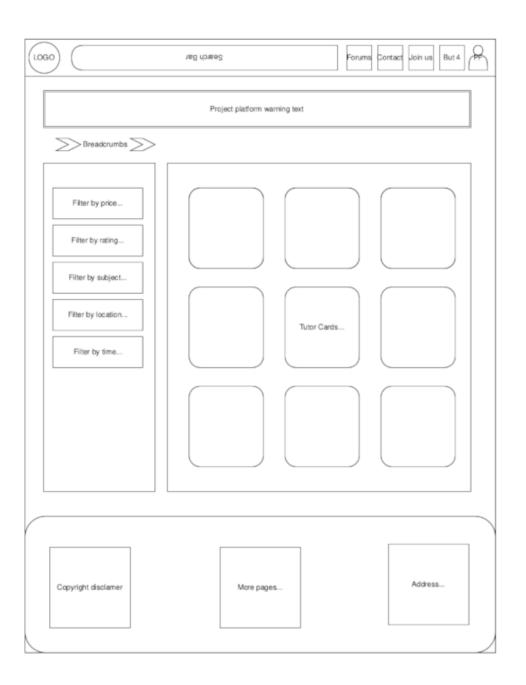
List of main data items and entities

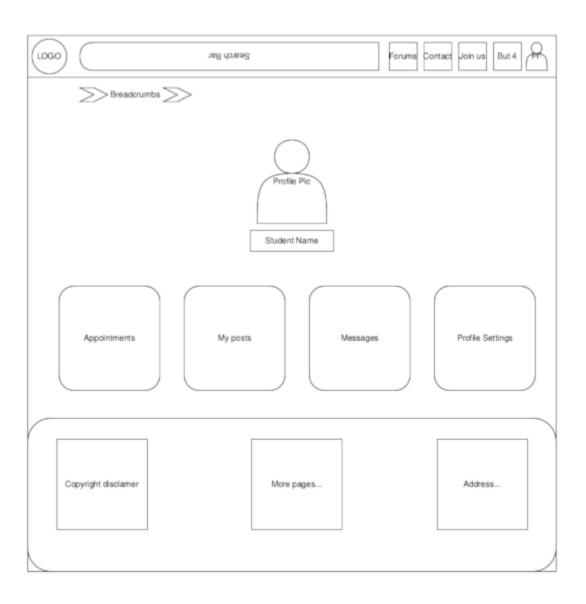
- 1. Tutor:
 - a. Profile information (name, contact details, bio, CV)
 - b. Pricing information
 - c. Availability Schedule
 - d. Uploaded content (images, videos, audio recordings)
 - e. Reviews and ratings
- 2. Student:
 - a. Profile information (name, email, password)
 - b. Preferences (preferred subjects, learning goals)
- 3. Administrator:
 - a. Dashboard access
 - b. Approval status for tutor profiles
 - c. Can read/update/delete any post
- 4. Community Forums:
 - a. Discussion threads
 - b. User posts (Questions and Answers)
- 5. Messaging System:
 - a. Messages between users and tutors

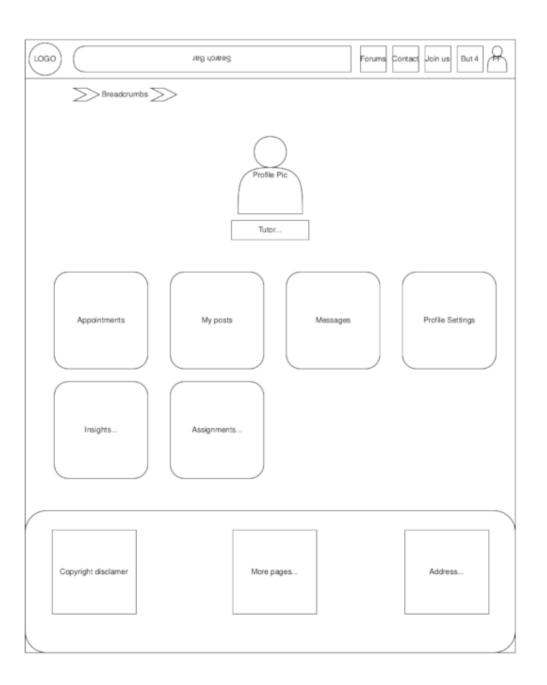
UI Mockups and Storyboards

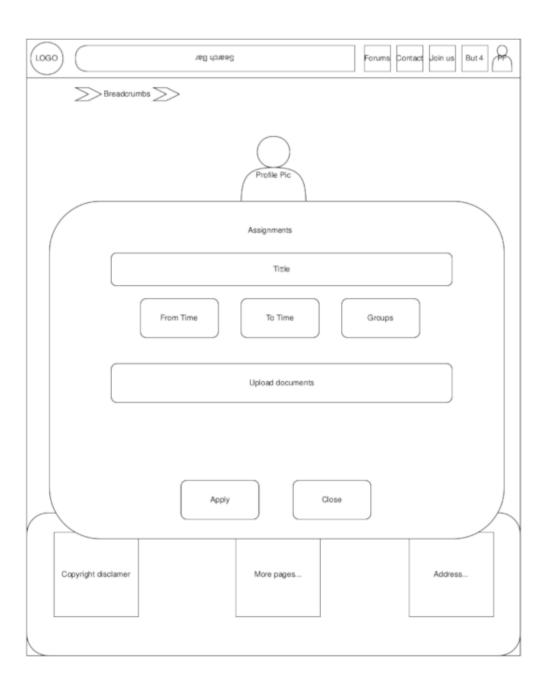
Common Pages

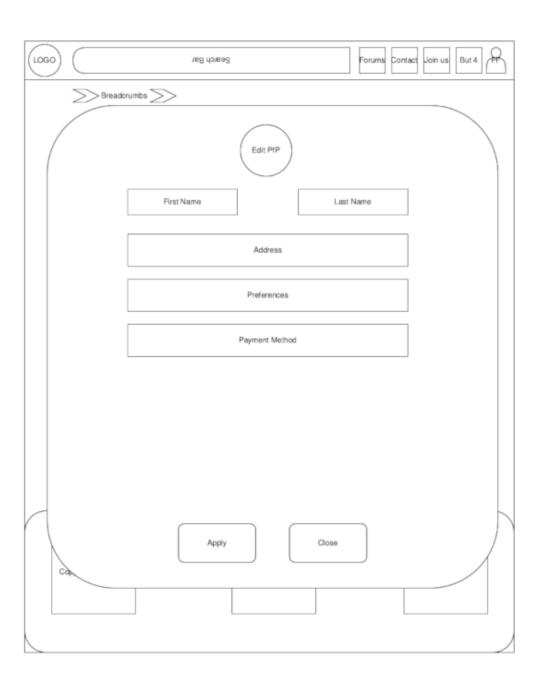


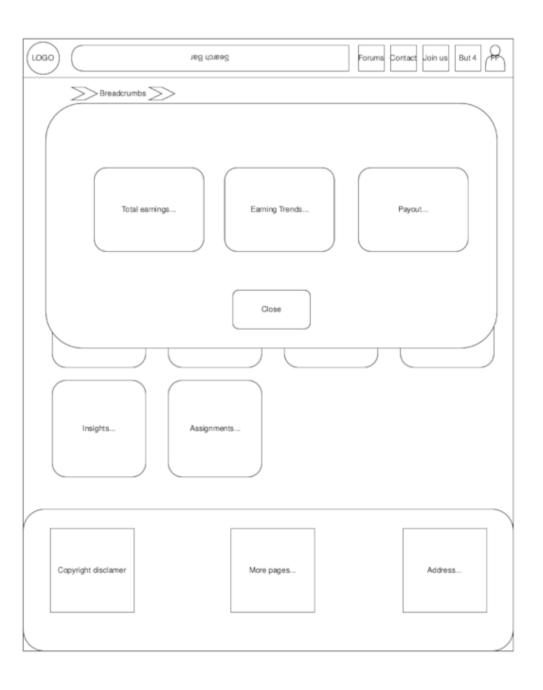


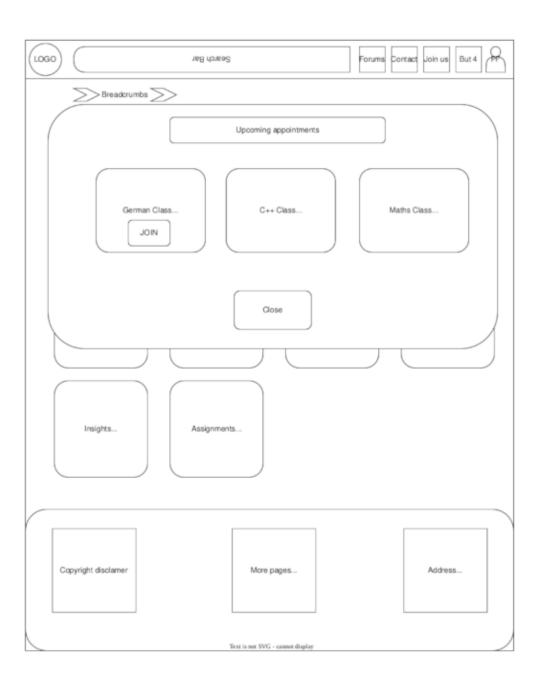


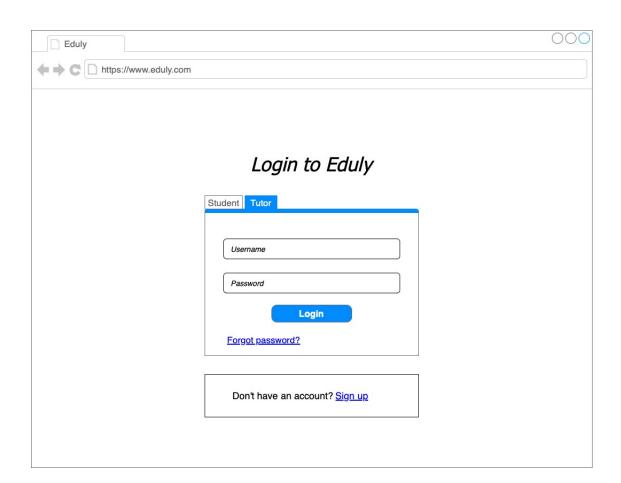


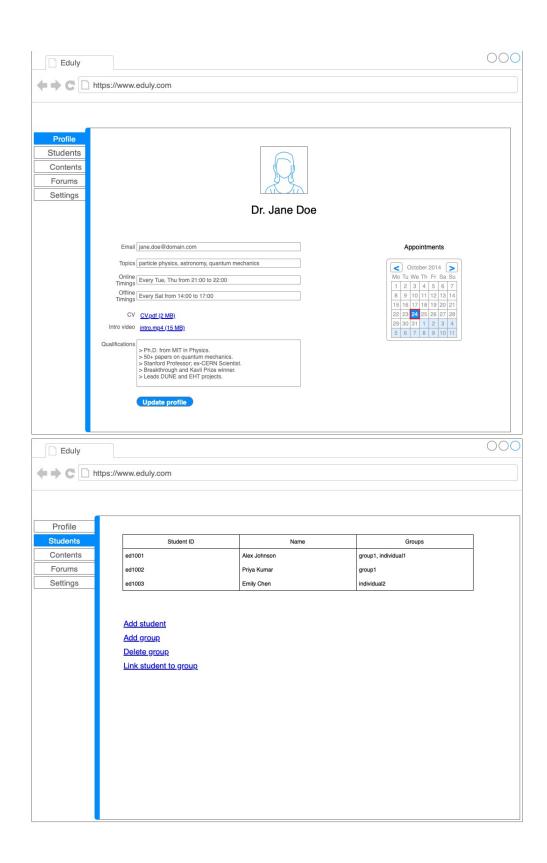


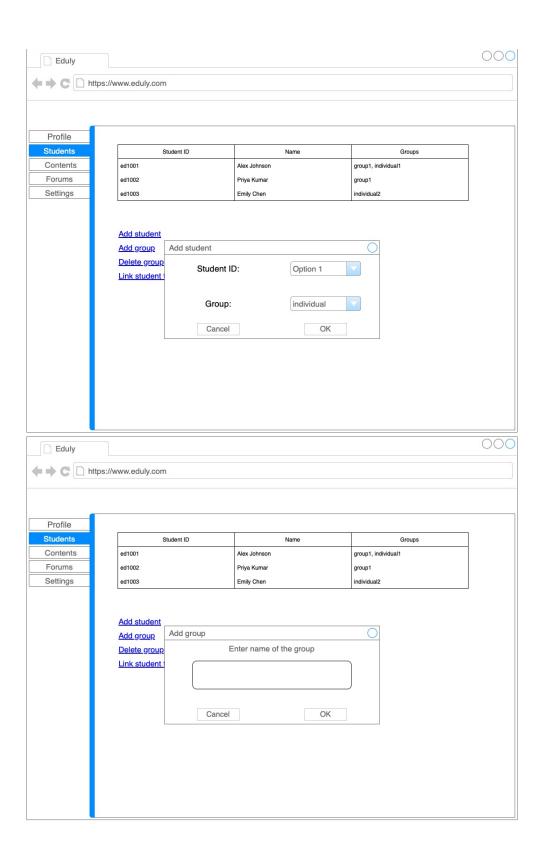


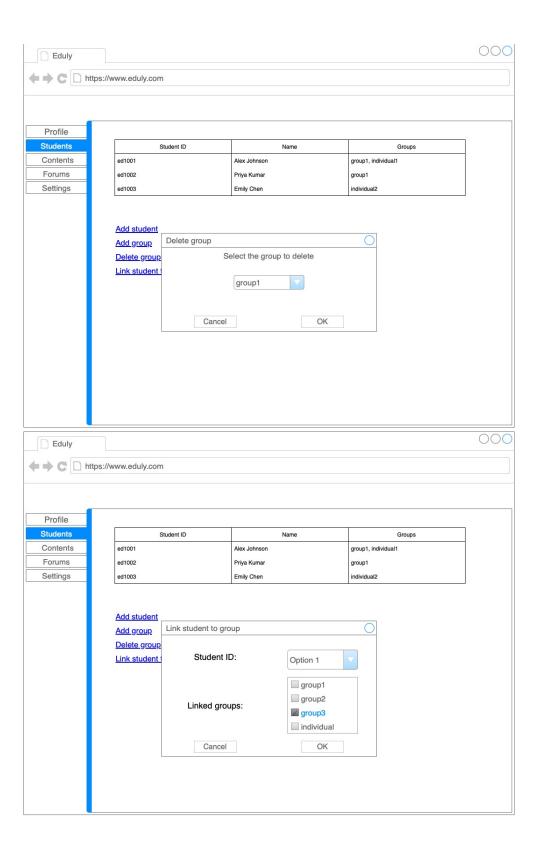


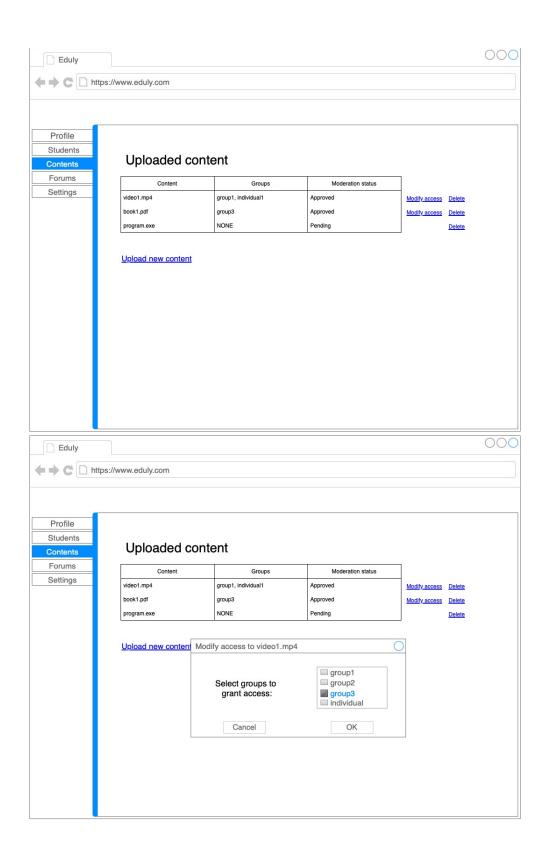


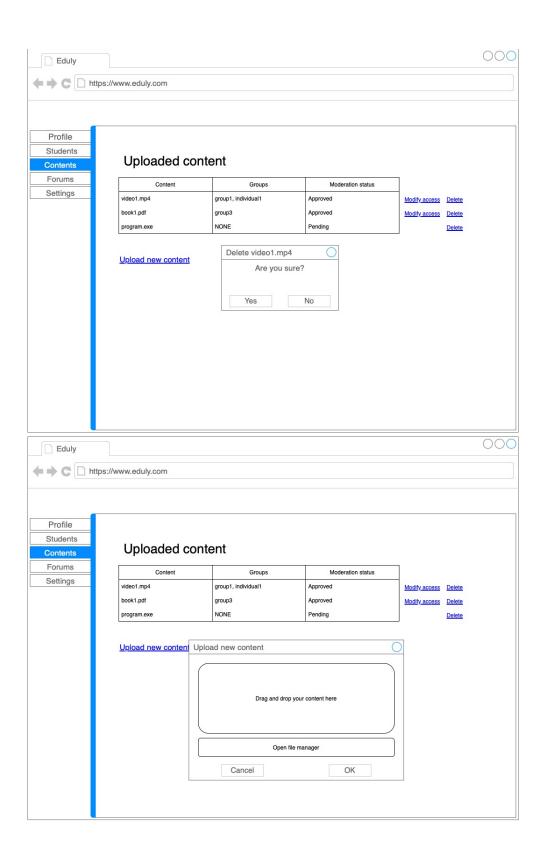


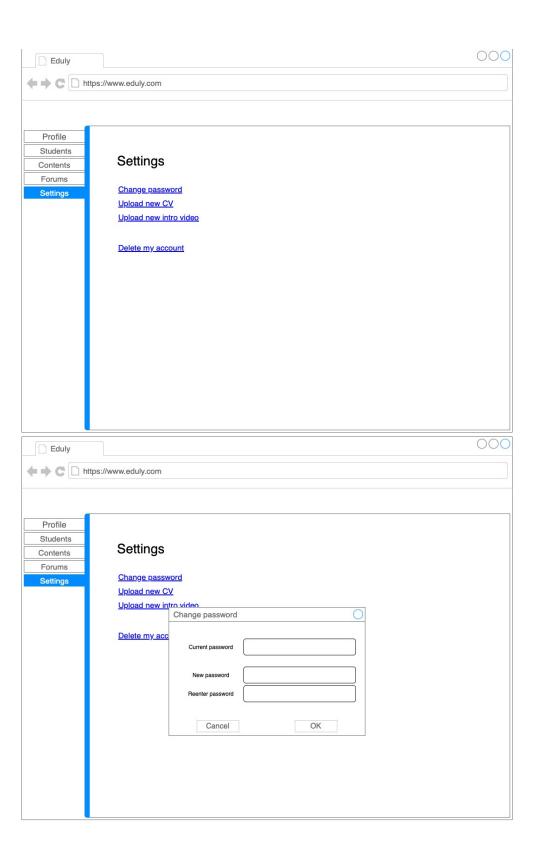


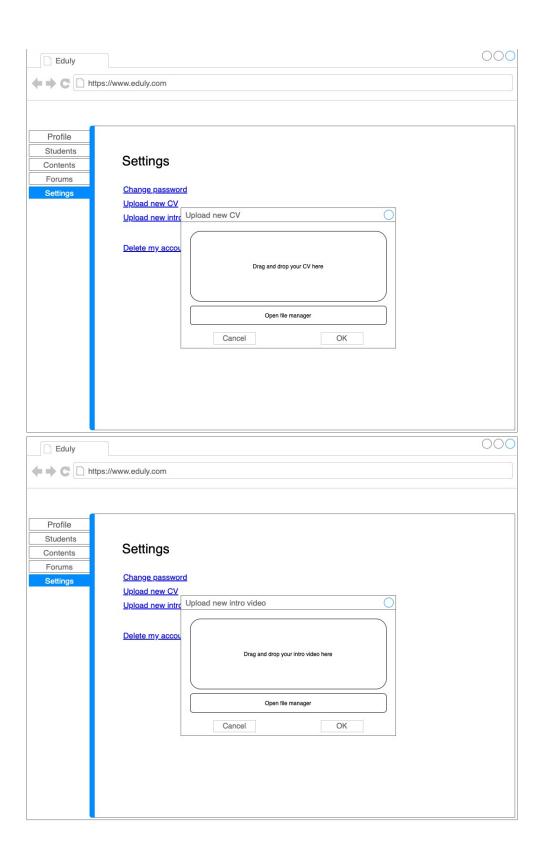


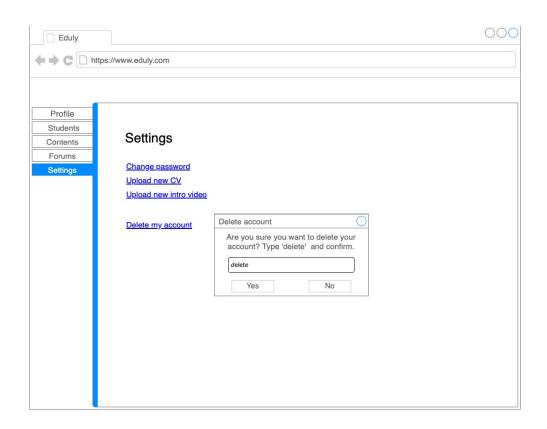


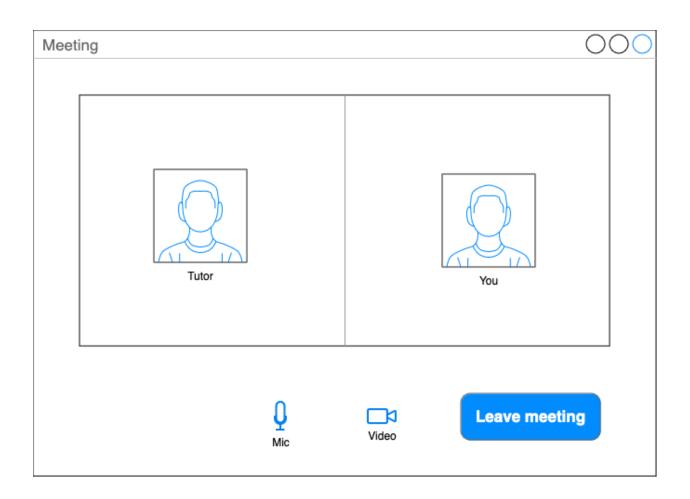






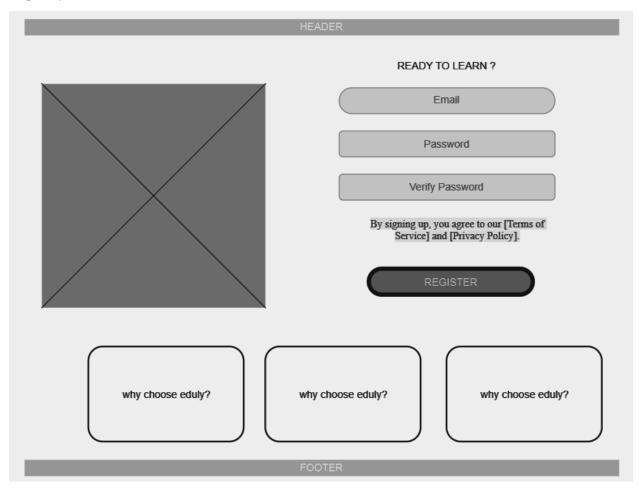




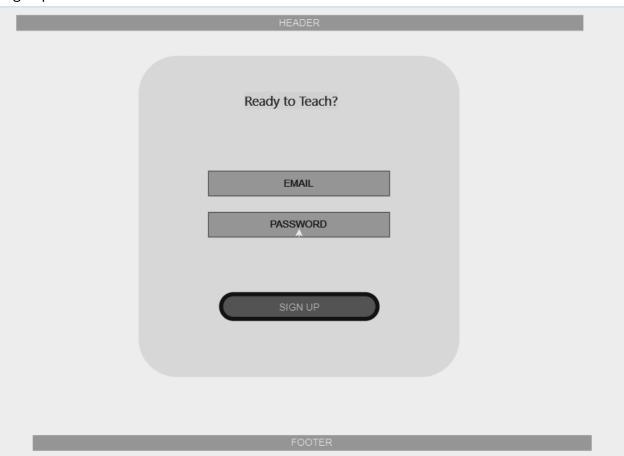


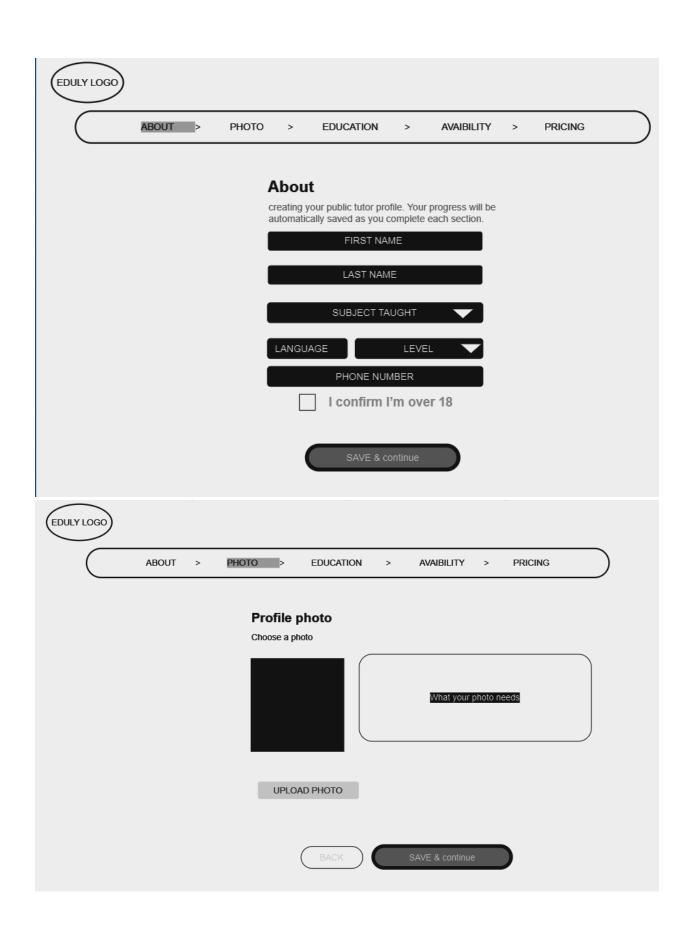
Student Pages

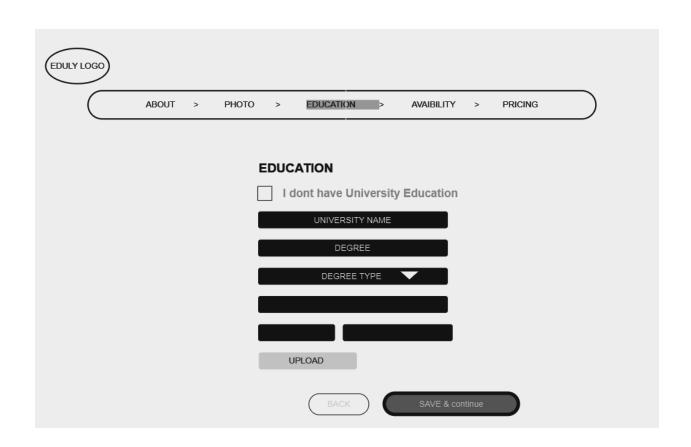
Sign up – Student



Sign up-TUTOR





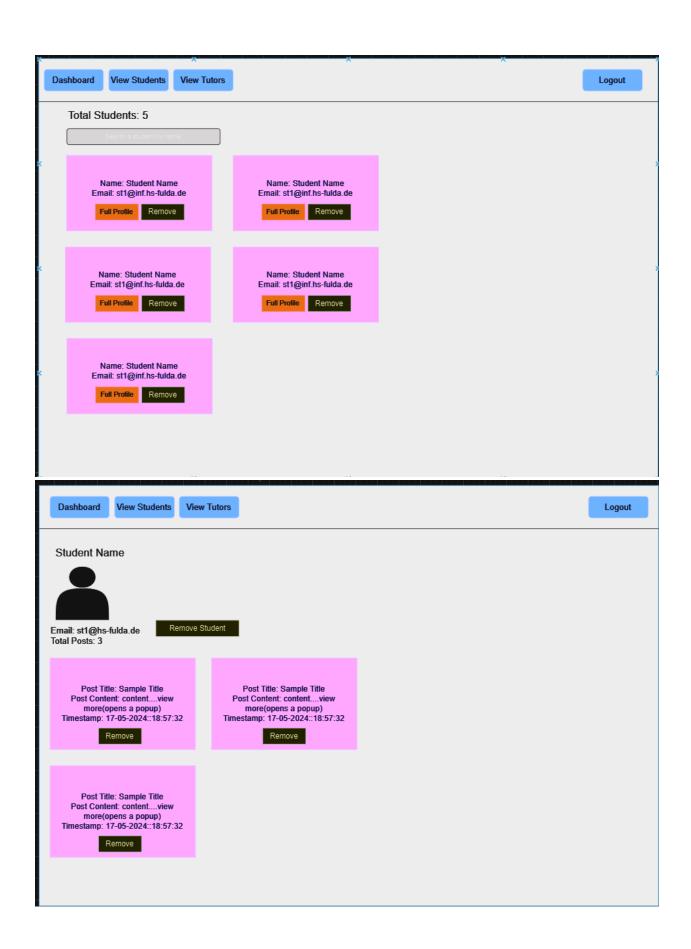


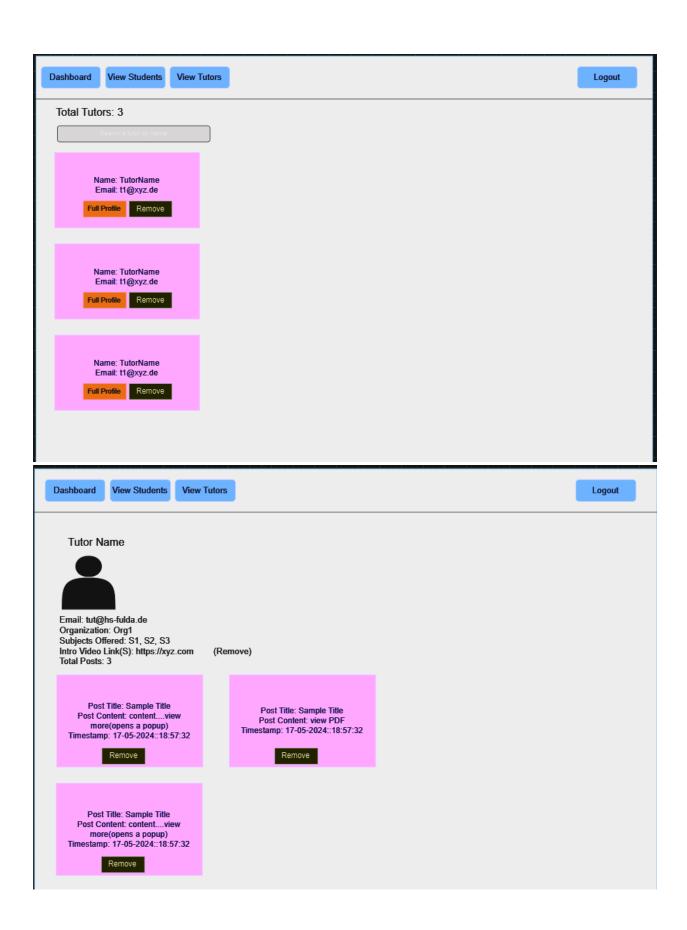




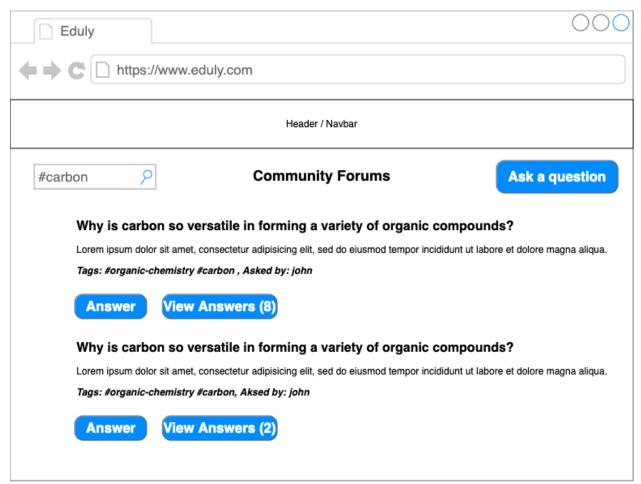
Admin Pages

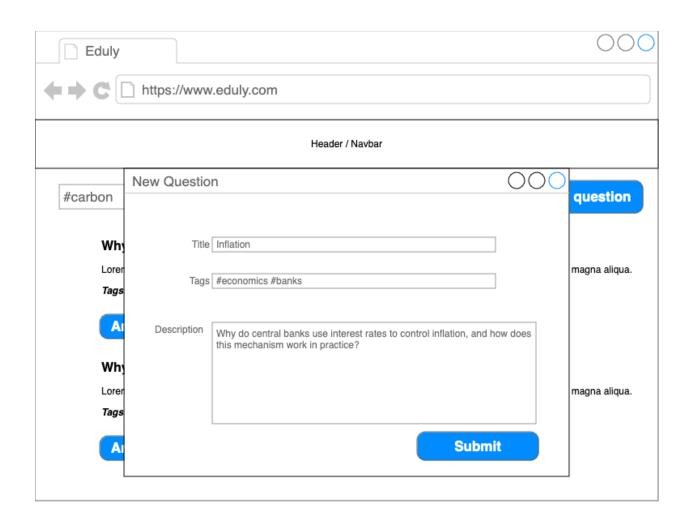


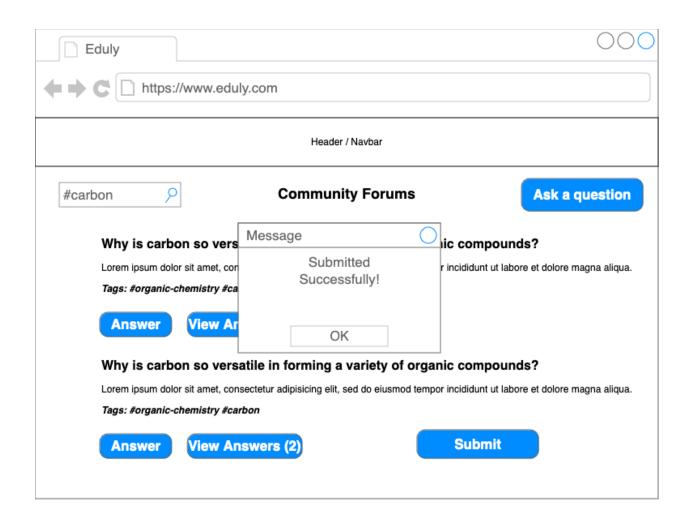


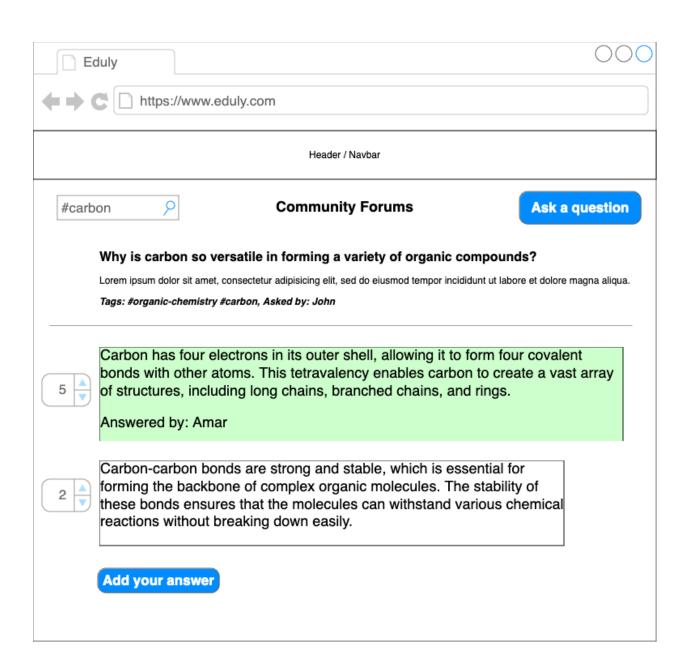


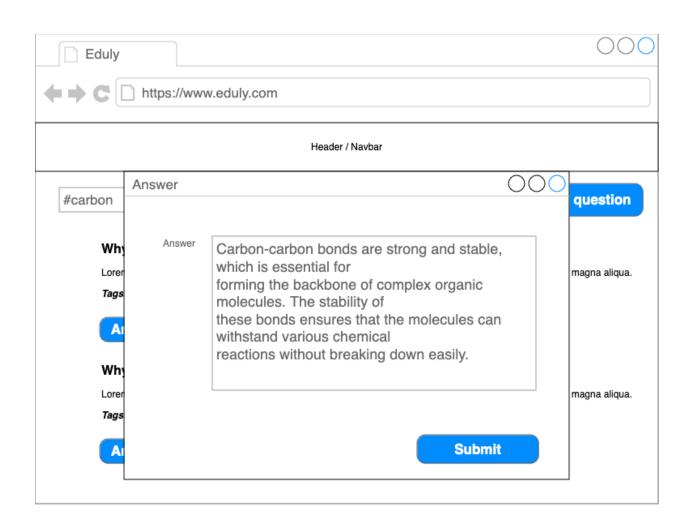
Community Forum Pages



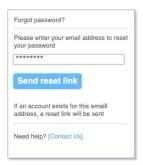






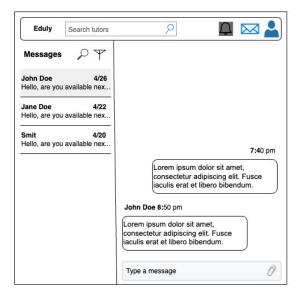


Forgot and Reset password

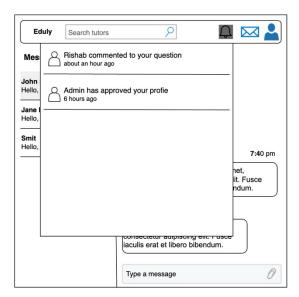




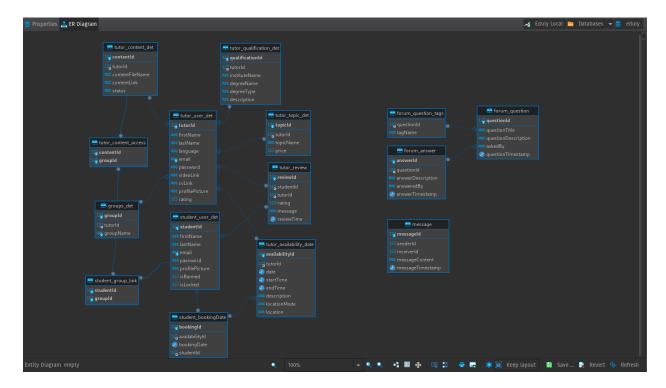
Messages



Notification



High-level architecture, Database Organization



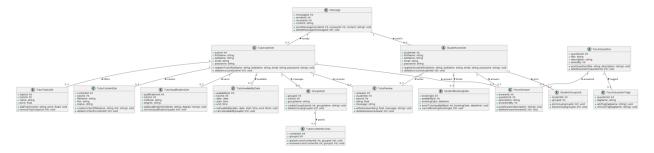
Search and Filter Algorithm

Jakarta persistence EntityManager will be used to connect our database with the backend application to handle database queries based on optional request parameters such as topic, pricingMin, pricingMax, and rating. We will execute a native SQL query and the returned rows from the DB will be sent to the frontend based on an agreed JSON format.

Storage

Actual content such as images, PDFs, and videos will be stored in Azure Blob Storage. The metadata to store and access information will be stored in the database.

High-Level UML Diagram



Key Risks

Skills Risks

Risk: Some team members lack experience in technologies like Spring Boot/React/Azure.

Mitigation: Use online resources and tutorials to accelerate learning. Help each other as required.

Schedule Risks

Risk: Uncertainty in meeting deadlines due to varied skill levels and learning curves / some member falls ill.

Mitigation: Implement a detailed project timeline with buffer periods for unforeseen delays. Conduct regular progress check-ins to ensure milestones are met.

Technical Risks

Risk: Potential technical challenges with integrating React with backend systems or other tools. For example, there might be a mismatch in the interfaces for the front-end and back-end.

Mitigation: Build a prototype to identify and resolve technical issues early. Allocate time for debugging and problem-solving in the project plan.

Teamwork Risks

Risk: Potential miscommunication or collaboration issues among team members with different skill sets and experiences.

Mitigation: Establish clear communication channels and regular meetings. Use collaborative tools (e.g., WhatsApp, Microsoft Teams, and GitHub Projects) to track tasks and ensure everyone is aligned.

Legal/Content Risks

Risk: Challenges in obtaining legally compliant content and software with proper licensing and copyright (e.g. images, videos, libraries/tools etc.).

Mitigation: Verify all content sources and software licenses before use.

Project Management

To effectively organize our tasks and work, we plan to utilize GitHub Projects. This tool allows us to create a project board where we can define and categorize tasks using columns such as "To Do," "In Progress," and "Done." Each task will be represented as an issue or a card, providing a clear overview of our workflow. By assigning tasks to team members and setting due dates, we can ensure accountability and track progress. Additionally, GitHub Projects integrates seamlessly with our repositories, enabling us to link code commits and pull requests directly to specific tasks, ensuring transparency and facilitating collaboration. Regular updates and reviews during our team meetings will help us stay on track and adapt to any changes or challenges that arise.

Distribution of work:

- Keshav: UI Mockups, Key Risks, Project Management
- Sagnik: UI Mockups, Database Design, UML
- Advaith: UI Mockups
- Ayush: UI Mockups, Database Design, UML
- Aashay: UI Mockups, Data Items & Entities, Database Design, UML
- Ammar: UI Mockups