

Assignment Cover Letter

(Individual Work)

Student Name	Mitha Alshibli Alreem Alkaabi	Degree Program	Computer Science
Registration No.	202203336 202307361	Title of Assignment	Course Project
Course Code	CSBP316	Due Date	30 th April 2025
Course Name	Human Computer Interaction	Submission Date	30 th April 2025
Section	51		

The assignment should meet the below requirements.

- 1- Assignment is required to be submitted on clean paper or soft copy as per professor's instructions.
- 2- Soft copy assignment also requires the signed (hardcopy) submission of this form, which automatically validates the softcopy submission.
- 3- The above information is complete and legible.
- 4- Compiles pages are firmly attached.

Plagiarism/Cheating

The university seriously regards all forms of plagiarism, cheating and collusion as academic offenses which may result in severe penalties and other possible penalties executed by the University.

Declaration of Originality

By signing this assignment, I understand, accept and consent to United Arab Emirates University (UAEU) terms and policies on plagiarism.

I hereby declare that this work represents my own effort, and that all text and code have been written by me and has not been submitted for the use of assessment in another course or class, except where this has been notified and accepted in advance.

Signature

Task 1: Topic Selection and Goal Setting

We choose “Designing interactive interfaces for e-learning apps”.

Our app will have a new creative interface for a learning app.

Functional requirements:

1. The system shall allow users to register and login.
2. The system shall display courses, deadlines, and any announcements.
3. The system shall allow users to upload files.
4. The user shall be able to view and interact with the course content.
5. The system shall allow users to submit assignments.
6. The system shall allow users to view their progress, grades and assignments.
7. The system shall allow users to participate in discussions in real time.
8. The system shall send notifications about new grades, assignments, and announcements.
9. The system shall include a calendar view.
10. The system shall include a note taking tool. E.g. built in apps like onenote, word, notability and goodnotes.
11. The system shall include an email viewing tool
12. The system shall include a task tracking tool. E.g. built in productivity tool like notion, to-do.
13. The system shall include social features. Adding and following classmates.
14. The system shall include a private chatting tool. E.g. built in WhatsApp groups.
15. The system shall include a groups and group assignments management page.
16. The system shall allow users to adjust the website accessibility settings.

Non-functional requirements:

1. The system shall have an easy to learn intuitive interface.
2. The systems shall have clear labels and navigation.
3. The system shall support touch, voice and keyboard navigation and screen reader.
4. The system shall load page in 1 second.
5. The system shall support 20,000 concurrent users with performance issues.

Goal setting:

1. Enhance the usability and accessibility of online learning interfaces.
2. Improve student engagement.
3. Streamline Student work.
4. Address pain points observed in Blackboard.
5. Make e-learning a complete e-learning ecosystem, by including all tools needed and used commonly by students.

Task 2: User Research

We conducted a survey on a sample of 5 students. We conduct a general (between black board and other learning apps) survey to understand student's needs, pain point and goals.

Link of the survey: [Interactive Interface Design for E-Learning Apps](#)

Persona 1: Aisha

- Age: 20
- Education: 3rd Year Undergraduate student, Information Technology
- Device Usage: Smartphone and Laptop
- Frequency: Daily
- Session Length: 15-30 minutes
- Motivators: Career advancement, personal growth, academic requirements.
- Learning Style: Interactive quizzes, progress tracking, structured courses.
- Pain points:
 - Lacks offline access and a good note-taking system.
 - Interface is not very customizable
 - Wants more engagement in course material
- Goals: Preparing for certifications, measuring success through assessments.
- Ideal App: Clean UI, offline mode, live discussion, diverse assessments.

Persona 2: Reem

- Age: 21
- Education: 3rd Year Undergraduate student, Science
- Device Usage: Smartphone & Tablet
- Frequency: Several times a week
- Session Length: 30-60 minutes
- Motivations: Academic requirements, skill acquisition
- Learning Style: Reading text, offline access, structured resources
- Pain points:
 - Excessive amount of material that is hard to go through
 - Wants more customizable study plans
 - Lacks advanced accessibility options
- Goals: Gaining real-world applicable knowledge
- Ideal App: Personalized, inclusive, accessible with progress insight.

Task 3: Competitive analysis

BlackBoard:

Strengths:

- Powerful data analytics for tracking student performance.
- Strong assessment and grading tool.
- Good integration with university administrative systems.

Weaknesses:

- Steeper learning curve for new users.
- Slower updates and innovation compared to competitors.
- Expensive licensing and maintenance costs.

(Tech & Learning, 2025)

Google Classroom

Strengths:

- Easy to use and fast learning.
- Free for schools and individuals.
- Integration with Google workspaces.

Weaknesses:

- Limited customization and personalization options.
- Basic grading and feedback tools compared to full LMS platforms.
- Less suitable for large scale university systems or complex curriculums.

(Technology Reviews, 2025)

Canvas LMS

Strengths:

- Modern and intuitive interface
- Strong third party integration such as zoom
- Open API for customization and extensions.

Weaknesses:

- High implementation costs for large institutions.
- Can be overwhelming with too many customization options.
- Occasional glitches with third party tool integration.

(K12 and Higher Education Technology, n.d.)

Moodle

Strengths:

- Open source and free.
- Highly customizable and flexible.
- Suitable for all education levels and corporate training.

Weaknesses:

- Interface can feel outdated if not heavily customized.
- Steeper learning curve for setup and administration.

(published, J. P. D., 2021)

Classes365

Strengths:

- All in one system LMS and student management, etc.
- Cloud based, easy access for administrators, teachers, students.
- Built in CRM and communication tools.

Weaknesses:

- Limited customization options compared to Moodle or canvas.
- Smaller brand recognition compared to big platforms such as Blackboard.

(classes365, 2025)

Deliverable: Summarize insights on what the team could incorporate, improve, or avoid in your design.

Summary:

Incorporate/improve:

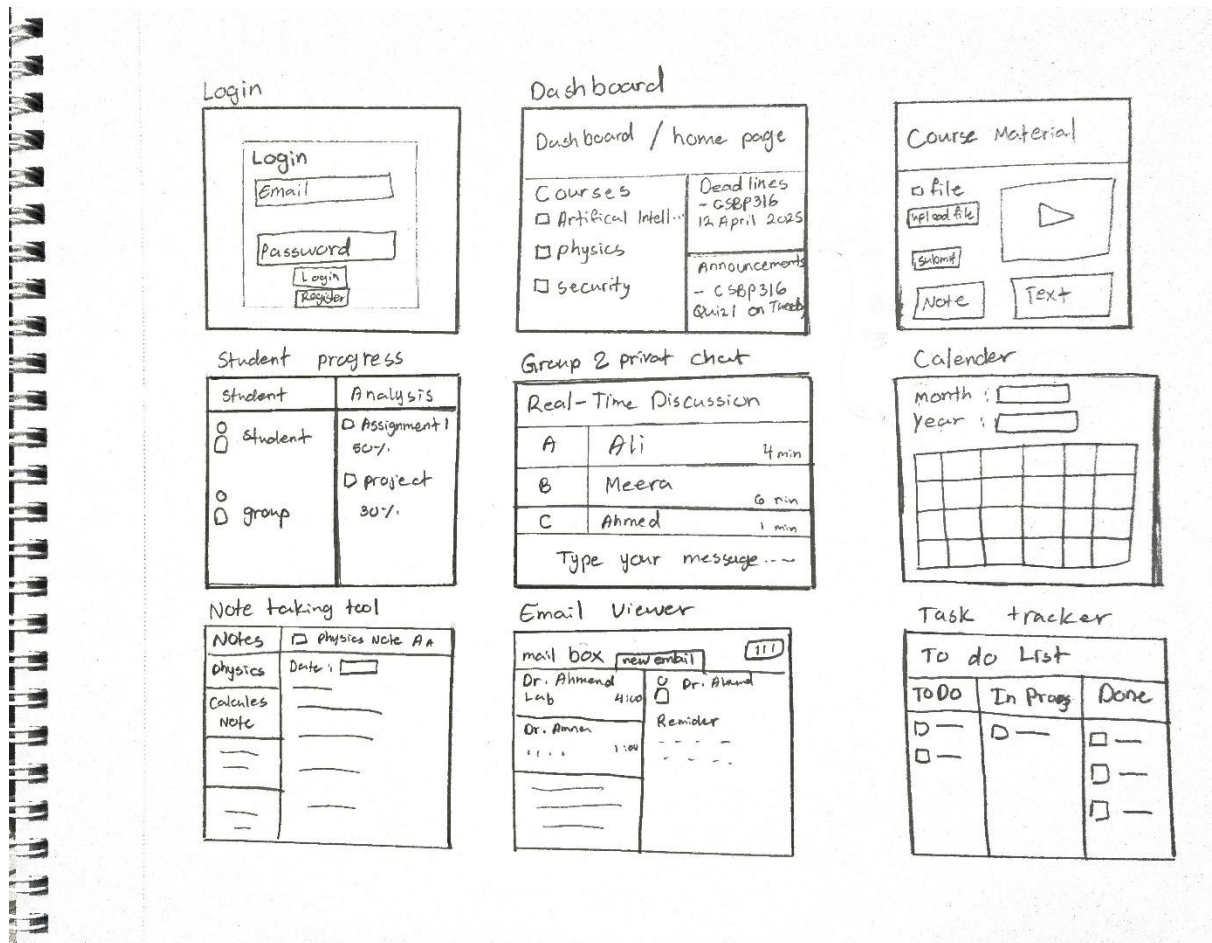
- Clean, simple user experience.
- Integrations of popular tools such as Zoom, Google Drive, etc.
- Good analytics for tracking student progress in an easy-to-read way
- Allow users to add or remove features based on their need.

Avoid:

- Cluttered, outdated interface
- Inconsistent navigation patterns
- Excessive clicks to access key features
- Poor visual hierarchy

Task 4: design Ideation

- Hand-Drawn Sketches: scan image



Task 5: Prototyping design

Prototype Link:

<https://www.figma.com/proto/yURTUKNPizFy41xdUV7eJ4/HCI-Project?node-id=202-866&t=CfB8OWk2z1ljM0lq-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=202%3A866>

Design Link:

<https://www.figma.com/design/yURTUKNPizFy41xdUV7eJ4/HCI-Project?node-id=0-1&t=JhPMg6dDnz2jn552-1>

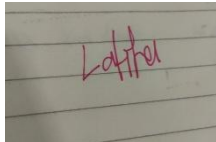
Screenshots are included in the appendix.

Task 6: Usability testing

Name: Latifa Alshibli

Mobile number: 0504246841

Signature:



Written Feedback:

What do you like most?

I really liked the clean and organized layout. The “Notes” section was especially helpful, and I found it easy to read and edit reflections.

What confused or frustrated you?

It took me some time to figure out where to post something or write a comment.

The message input isn't very visible, and I wasn't sure how to reply to specific users.

Any features you expected but didn't you see?

I was expecting a way to customize groups.

Suggestions for improvement:

Provide short tutorial for first time users.

Task 7: Iteration and Re-design

We refined the prototype by adding an accessibility settings page, a tutorial page, and course home page, an Assignment page, group management page, and a jahez program page.

- The new prototype allows users to customize the e-learning app to their preference using the accessibility settings page.
- The tutorial page will provide a quick visual demo to help them understand how to use the app and navigate it. (for Pre & Post Login)
- Course Home page added.
- Assignment Submission Page added.
- Groups Management page added.
- Link to a Jahez page form the dashboard announcement. With the week's schedule. To keep students updated.

View screenshots in the Appendix.

Task 8: Final Presentation and Documentation

Objective: Submit your final prototype and share your design process and findings.

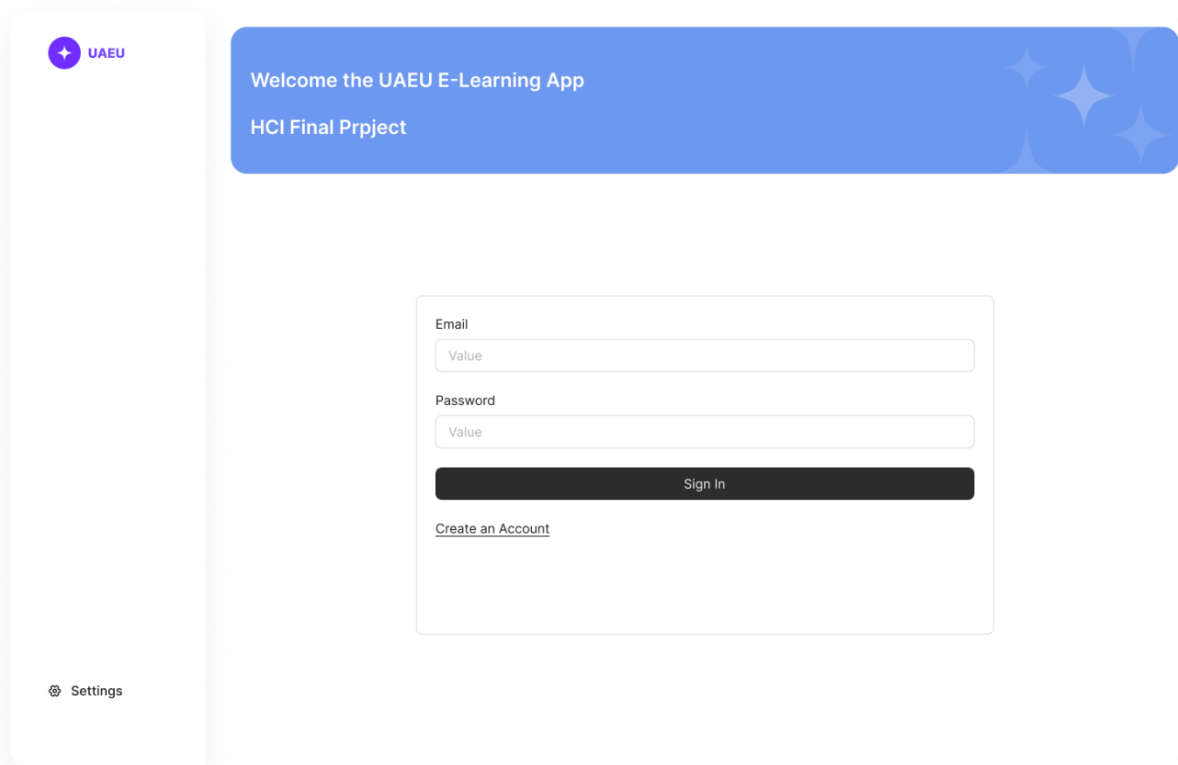
Deliverable: A report or presentation covering your research, design process, prototype, and conclusions.

References

1. *classes365.com*. (2025). Afternic.com.
https://www.afternic.com/forsale/classes365.com?utm_source=TDFS_DASLNC&utm_medium=parkedpages&utm_campaign=x_corp_tdfs-dasInc_base&traffic_type=TDFS_DASLNC&traffic_id=dasInc&
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<https://www.techradar.com/reviews/moodle-lms>
5. *Tech & Learning | Tools & Ideas to Transform Education*. (2025, April 25). Tech & Learning. <https://www.techlearning.com/>
6. *Technology Reviews | TechRadar*. (2025, April 26). TechRadar.
<https://www.techradar.com/reviews>

Appendix:

Task 5 Screenshots of the initial prototypes:



The login page features a vertical sidebar on the left with the UAEU logo at the top and a 'Settings' icon at the bottom. The main content area has a blue header with the text 'Welcome the UAEU E-Learning App' and 'HCI Final Prpject'. Below the header is a white login form with fields for 'Email' and 'Password', a 'Sign In' button, and a 'Create an Account' link.

UAEU

Welcome the UAEU E-Learning App
HCI Final Prpject

Email
Value

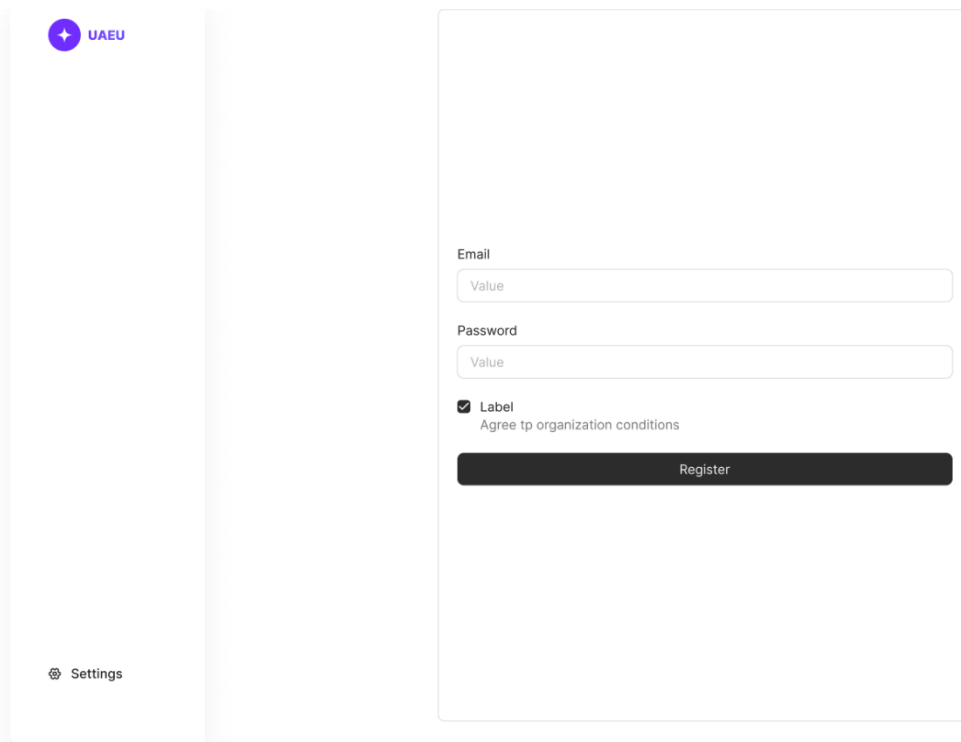
Password
Value

Sign In

[Create an Account](#)

Settings

Figure 1 Login Page



The registration page features a vertical sidebar on the left with the UAEU logo at the top and a 'Settings' icon at the bottom. The main content area has a white registration form with fields for 'Email' and 'Password', a checkbox for 'Agree to organization conditions', and a 'Register' button.

UAEU

Email
Value

Password
Value

☒ Label
Agree to organization conditions

Register

Settings

Figure 2 Registration Page to create account

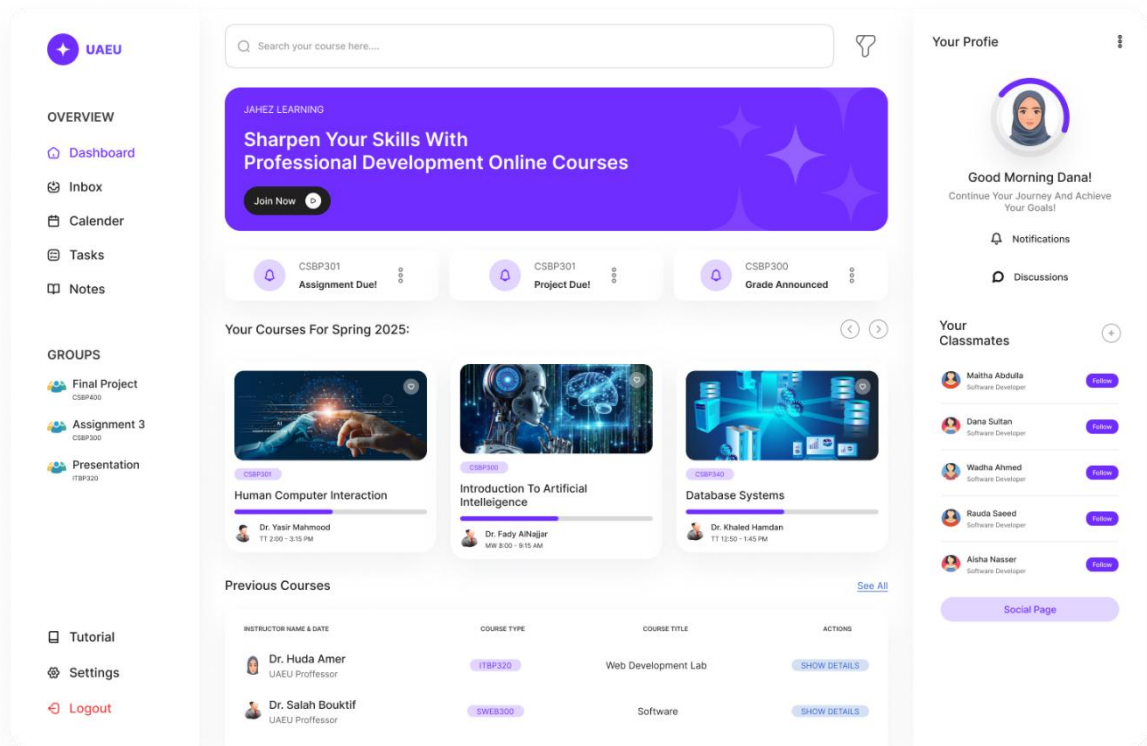


Figure 3 Student Dashboard

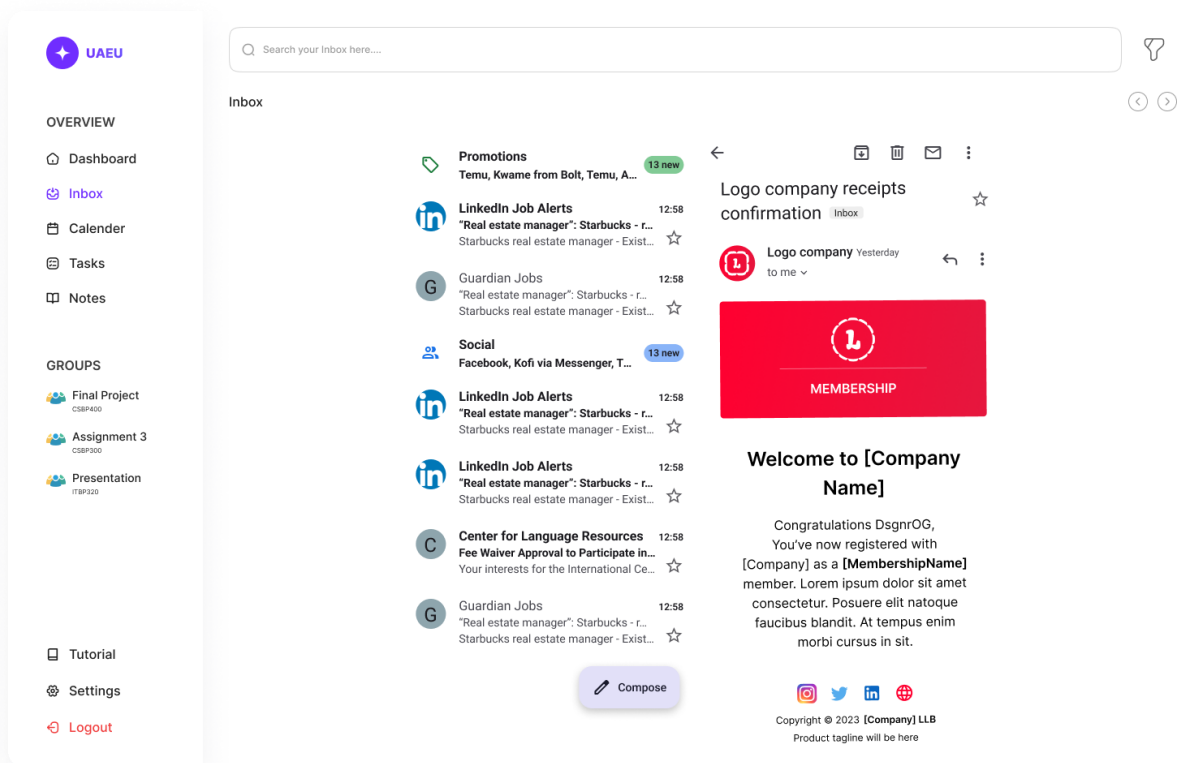


Figure 4 Inbox page

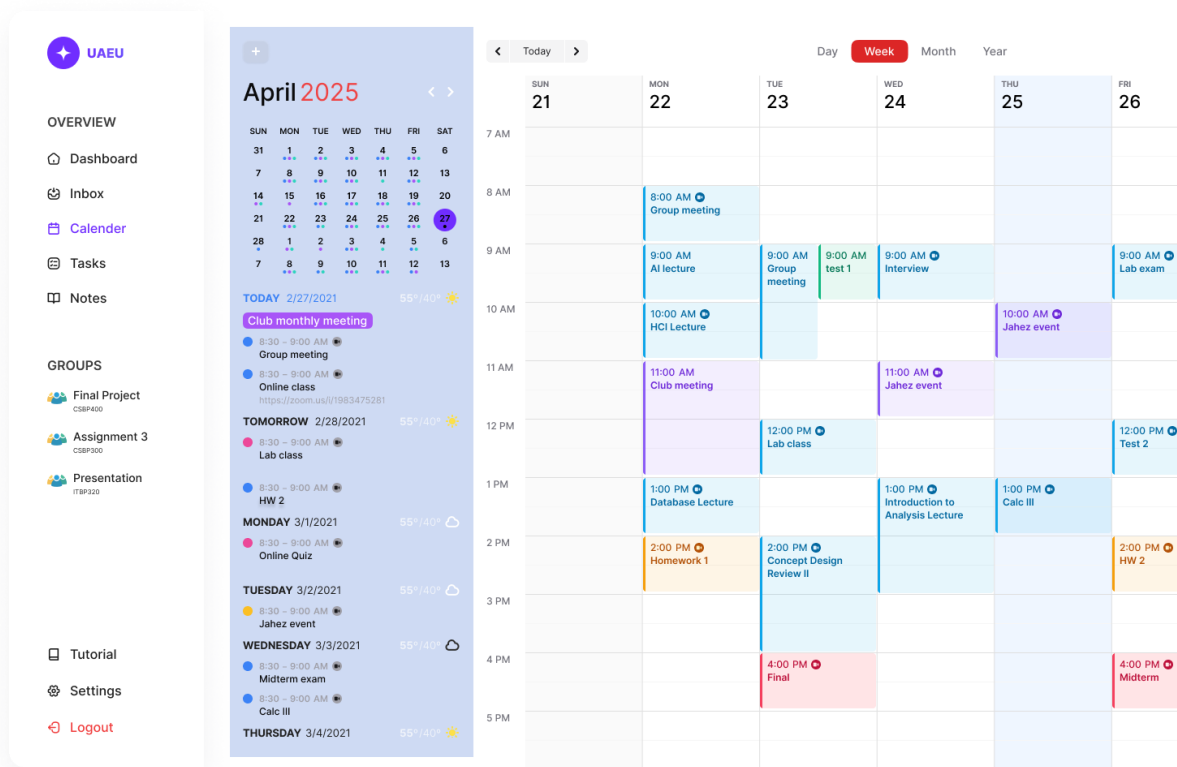


Figure 5 Calendar Page



Figure 6 Tasks Page

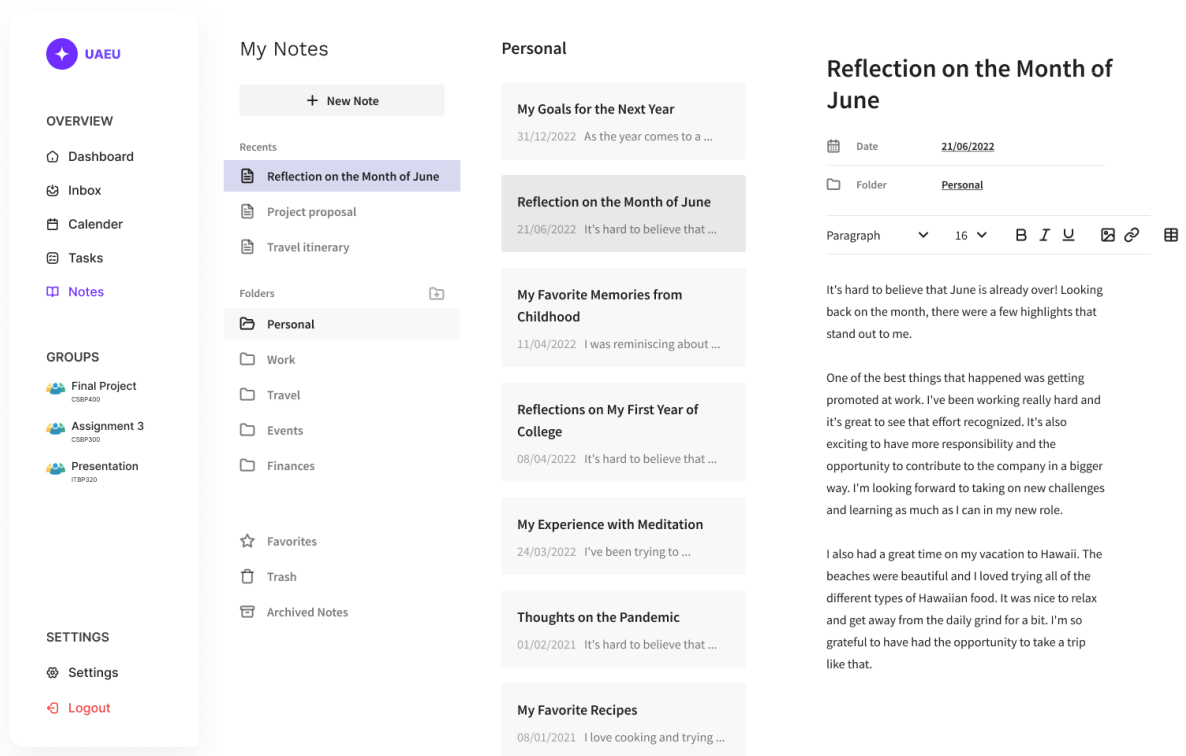


Figure 7 Notetaking page

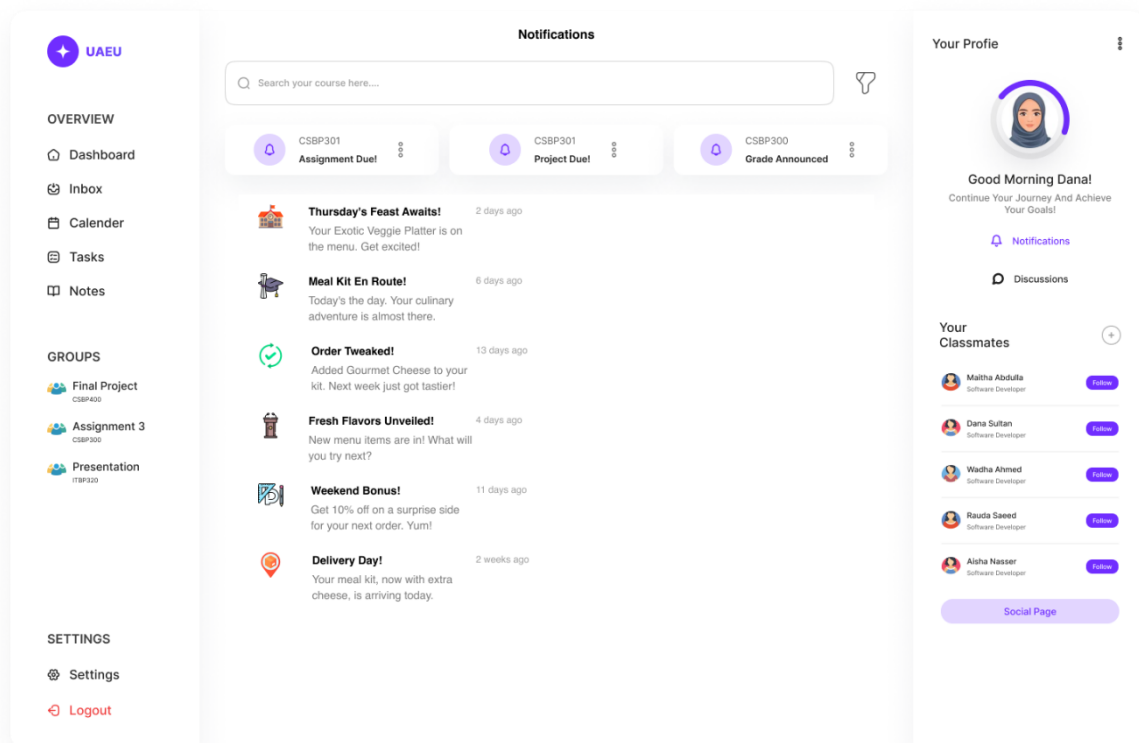


Figure 8 Notifications Page

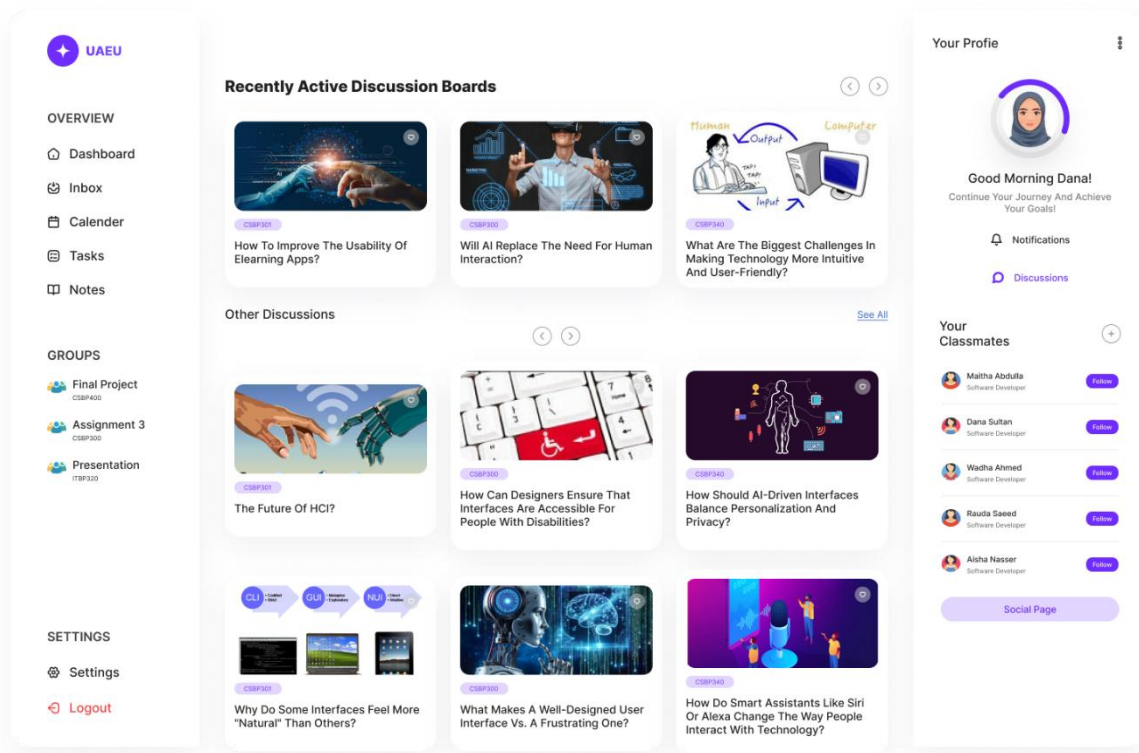


Figure 9 Discussions Page

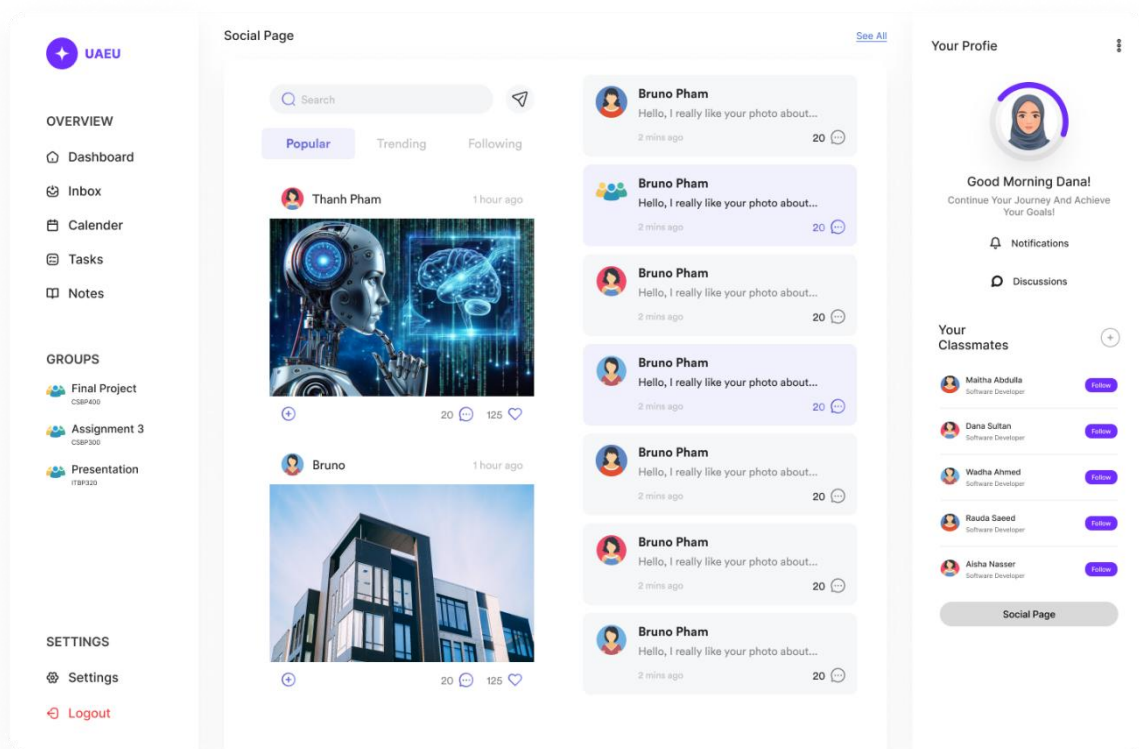


Figure 10 Social Page

Task 7 Screenshots of the prototype:

Pages that have not been redesigned have been omitted as they are displayed above in the task 5 section of the appendix.

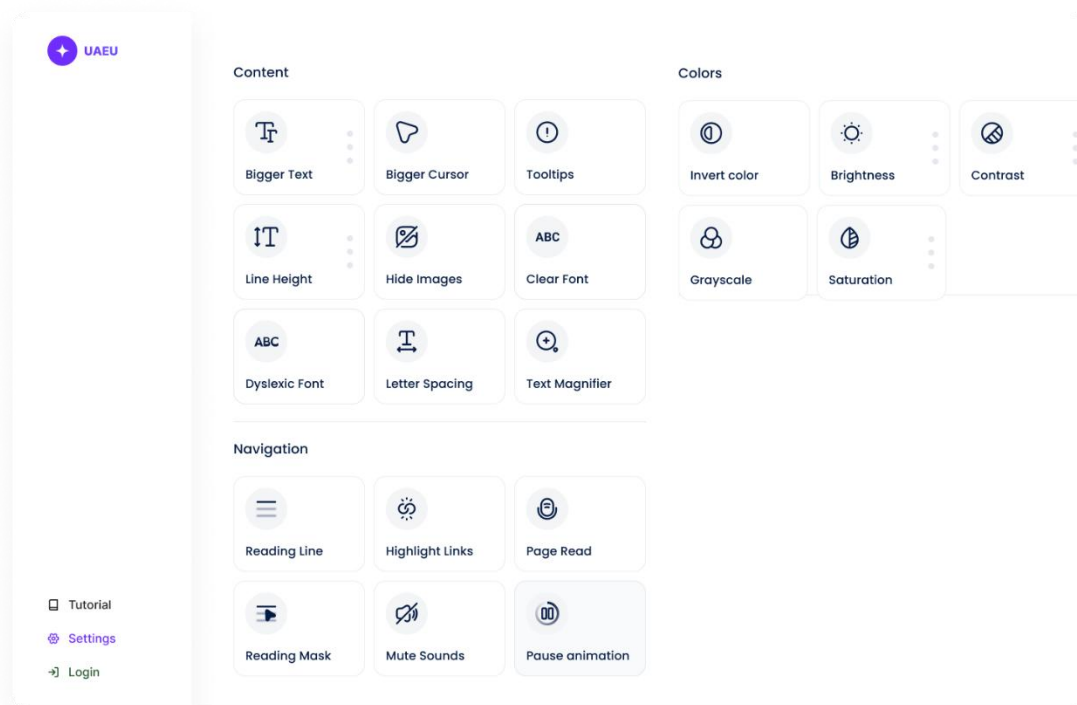


Figure 11 Accessibility Settings (pre-login)

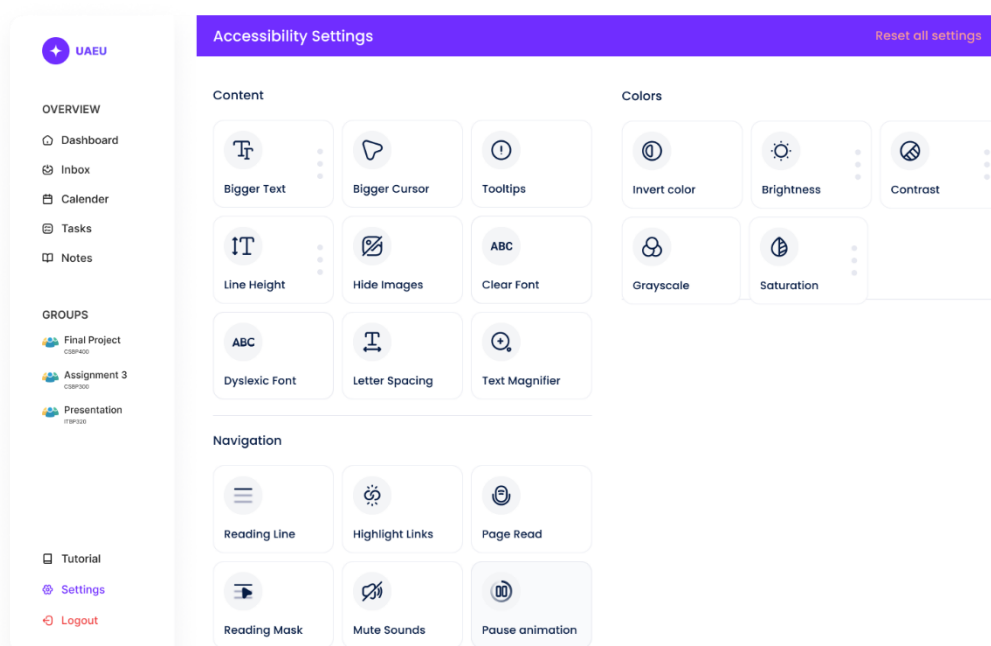


Figure 12 Accessibility Settings (post-login)

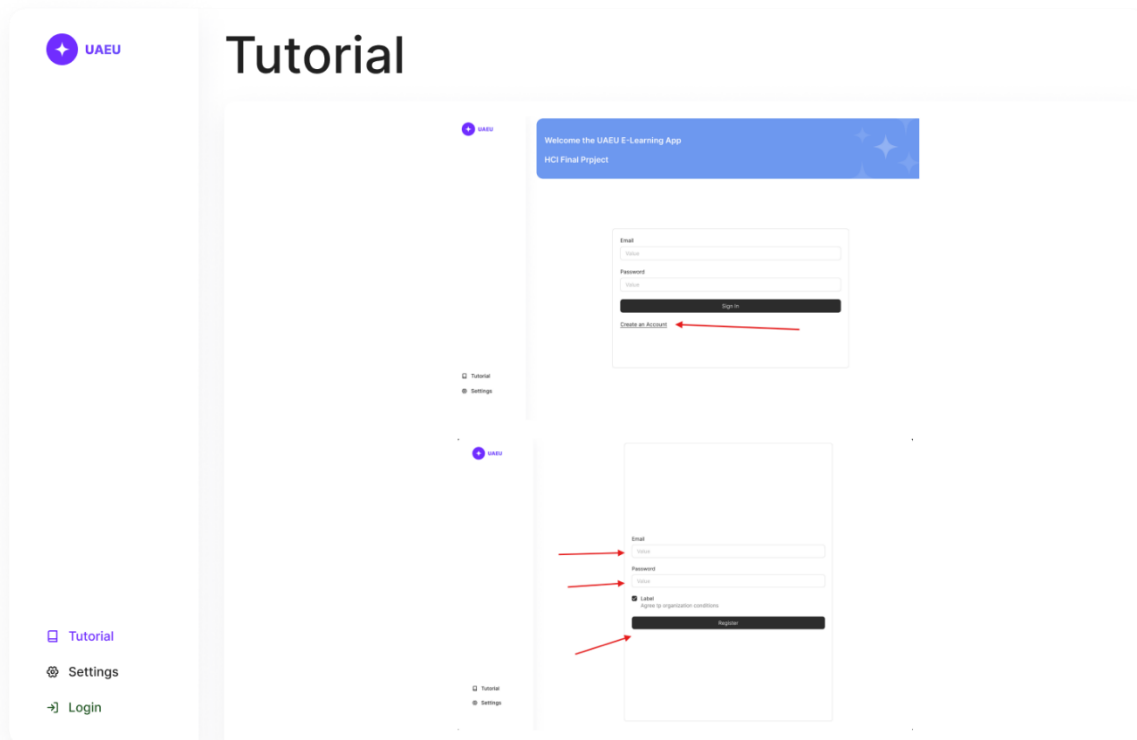


Figure 13 Tutorial Page (pre-login)

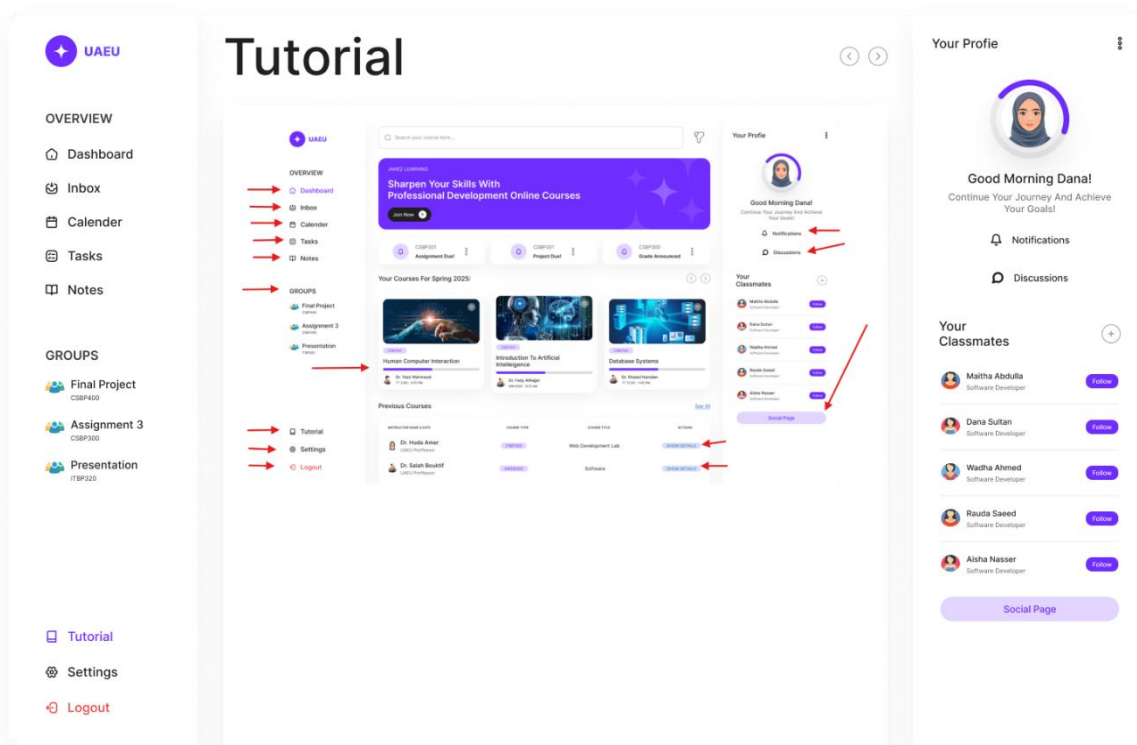


Figure 14 Tutorial Page (post-login)

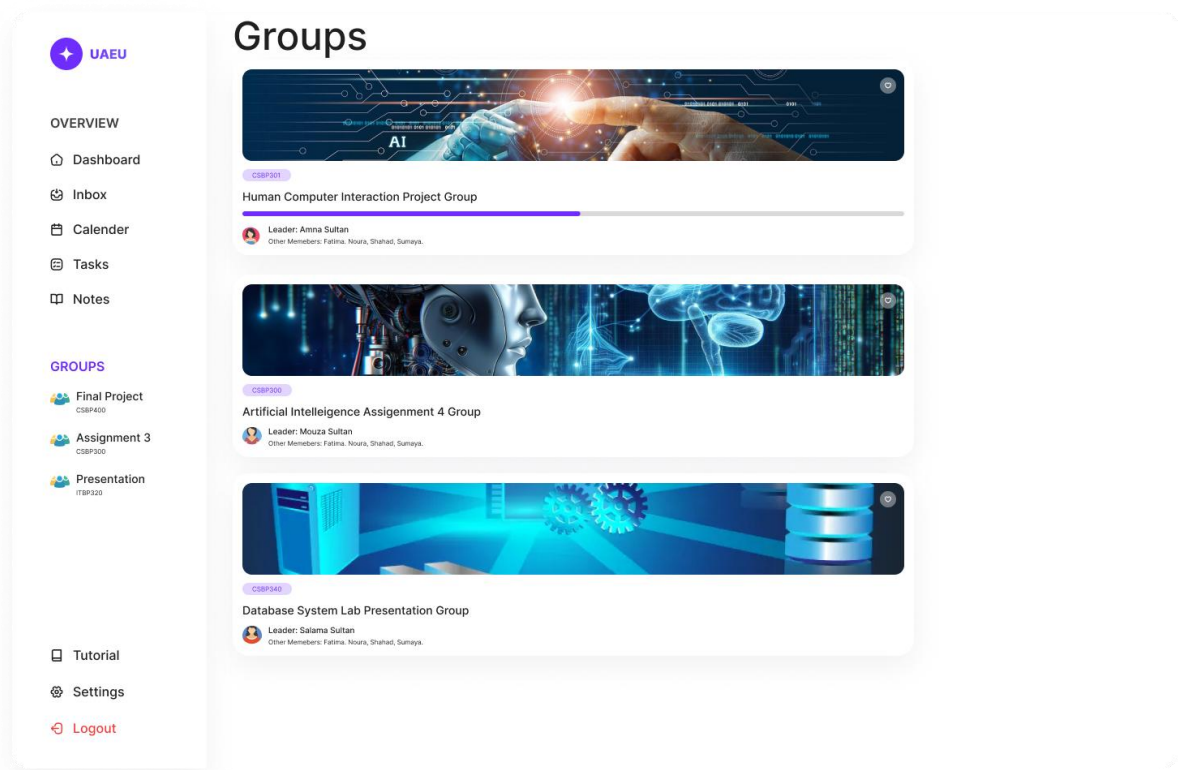


Figure 15 Groups Page

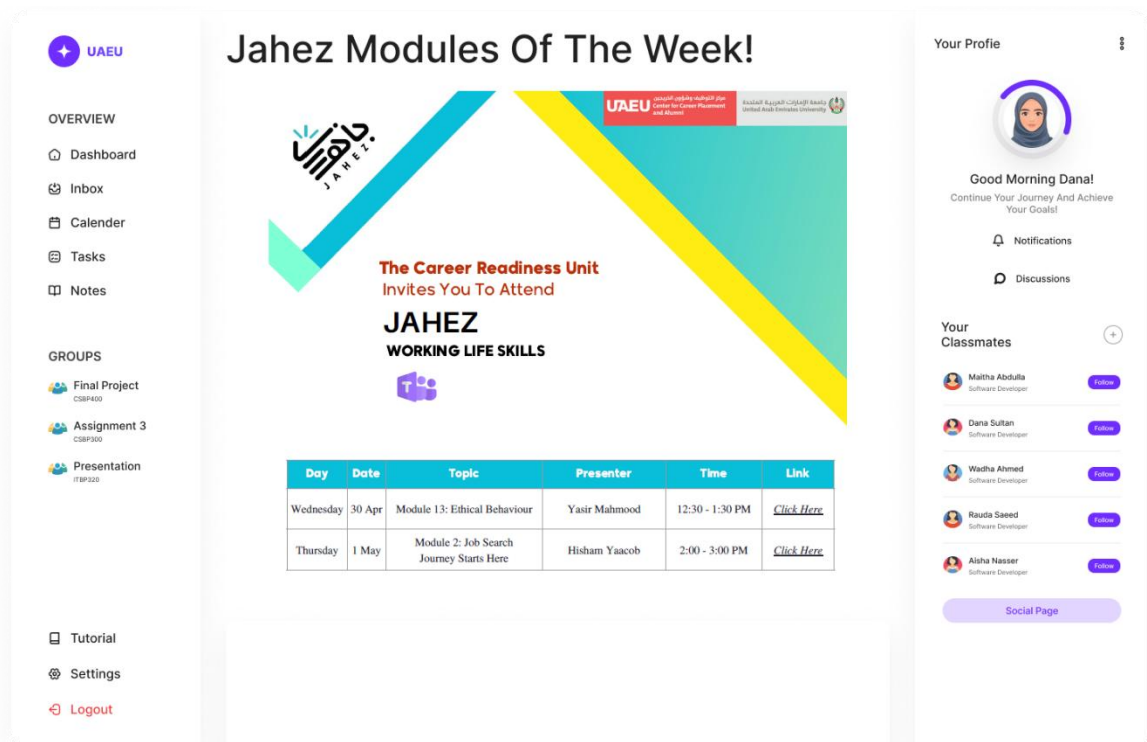


Figure 16 Jahez Announcements Page

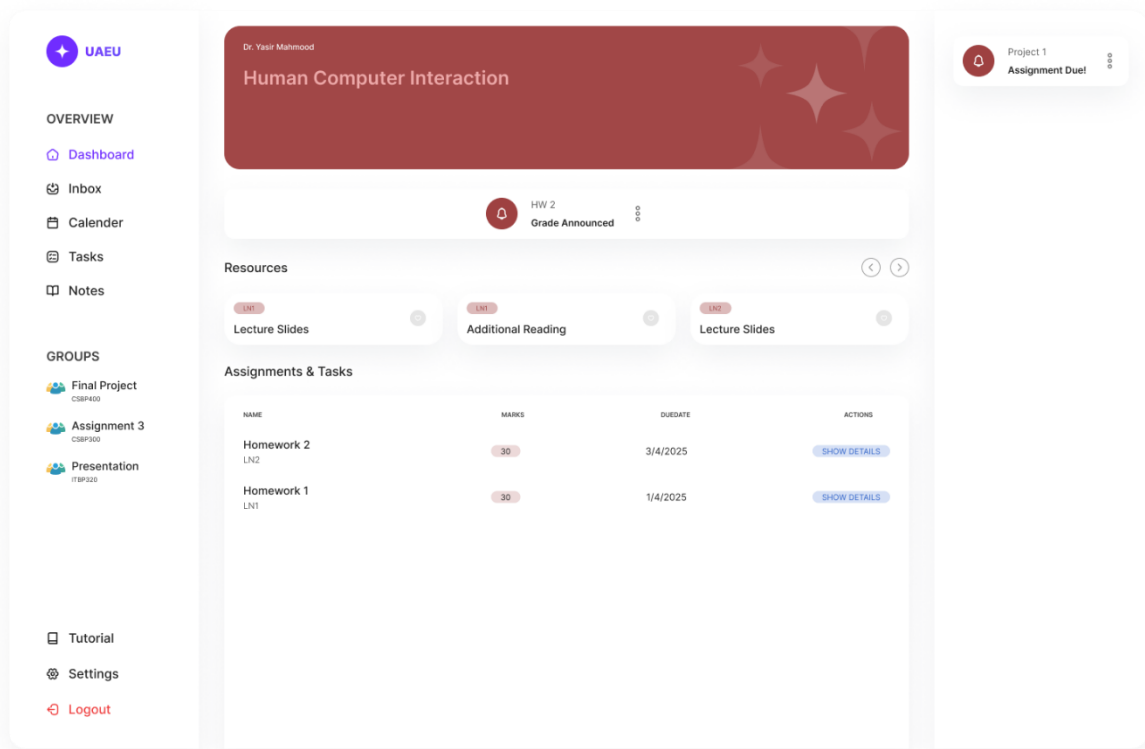


Figure 17 Course Page

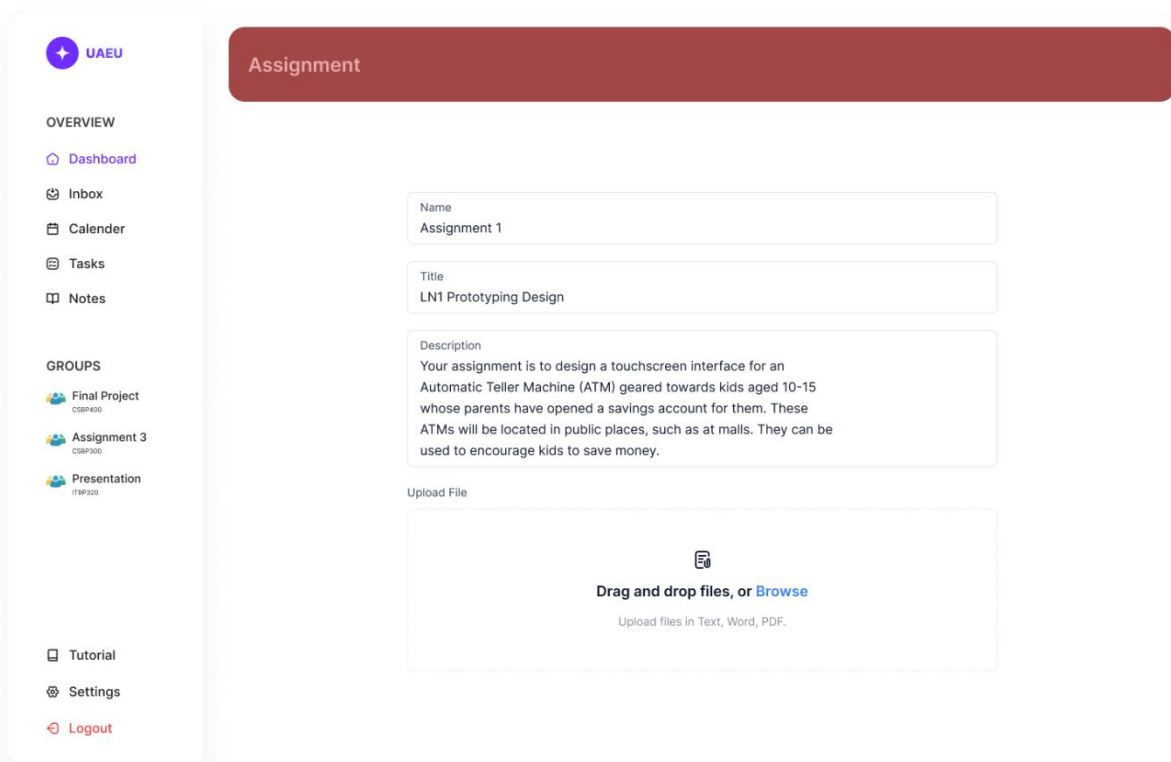


Figure 18 Assignment Submission Page