Problem Overview:

The project involves designing and implementing a user interface for a grading system from two perspectives: the instructor's view and the student's view. Key components for each view have been highlighted to ensure comprehensive functionality and user satisfaction.

User and Task Characteristics:

A. Instructors' View Key Components:

1. **Grading Criteria and Rubrics**
    - **Task:** Define clear grading criteria and rubrics for each assignment or assessment.
    - **Characteristics:** Instructors should be able to easily define their grading criteria.
2. **Robustness and Efficiency**
    - **Task:** Utilize a method that ensures easy, error-free input of grades, calculations, and feedback provision.
    - **Characteristics:** The system should minimize errors, simplify the grading process, and provide effective feedback.
3. **Feedback Mechanism**
    - **Task:** Provide constructive feedback along with grades to help students understand their strengths and areas for improvement.
    - **Characteristics:** The system should enable instructors to easily give students constructive feedback with the grades.
4. **Student Performance Statistics**
    - **Task:** Track trends in student performance over time to identify areas of strength and weakness in the curriculum.
    - **Characteristics:** Instructors need access to data analytics tools to monitor student performance over time, aiding in curriculum improvement.

B. Students' View Key Components:

1. **Transparency**
    - **Task:** Students should have access to their grades and feedback and see the grading criteria.
    - **Characteristics:** Information should be available in a timely manner with transparency regarding grade calculations and course standing.
2. **Appeal Process**

- **Task:** Establish a clear process for appealing grades.
- **Characteristics:** The process should be clear and straightforward to ensure fairness and address any errors.

3. **User-Friendly Interface**
   - **Task:** Students should navigate the interface easily and be able to view grades and feedback.
   - **Characteristics:** The interface should be user-friendly, making it easy to navigate and quickly access grades, feedback, and other key components.

Design Presentation

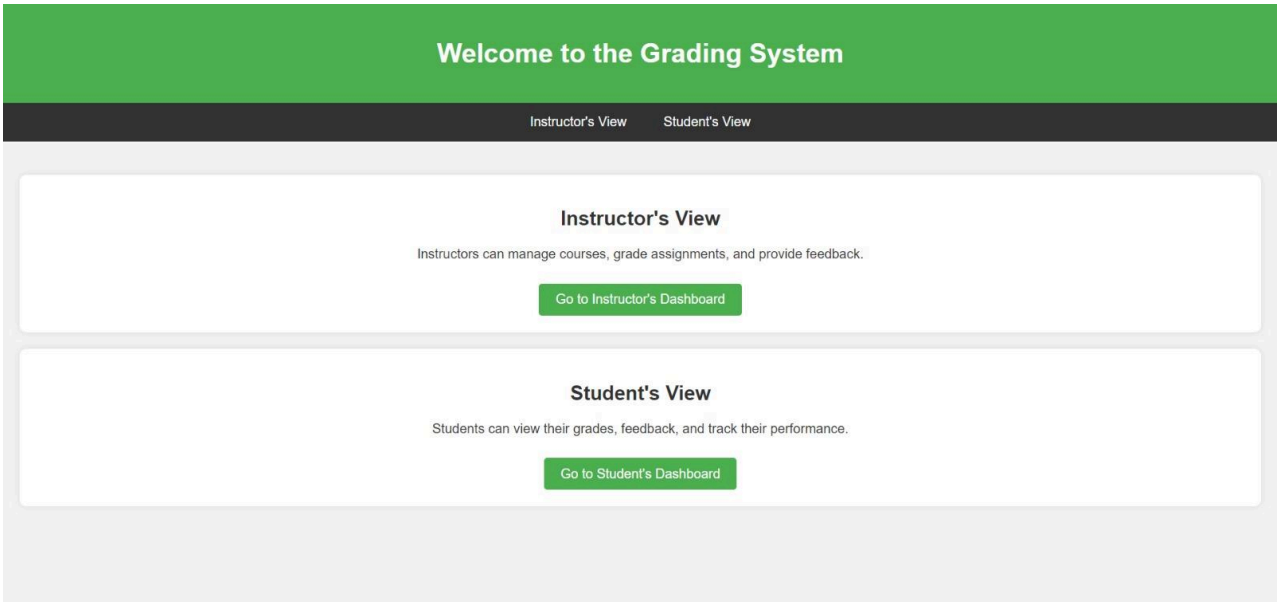
low-fidelity Prototyping

Overview

The grading system design includes three main pages: the Home Page, Instructor Dashboard, and Student Dashboard. Each page is designed to be user-friendly and aesthetically pleasing, with a consistent color scheme and layout.

Illustrations

Home Page

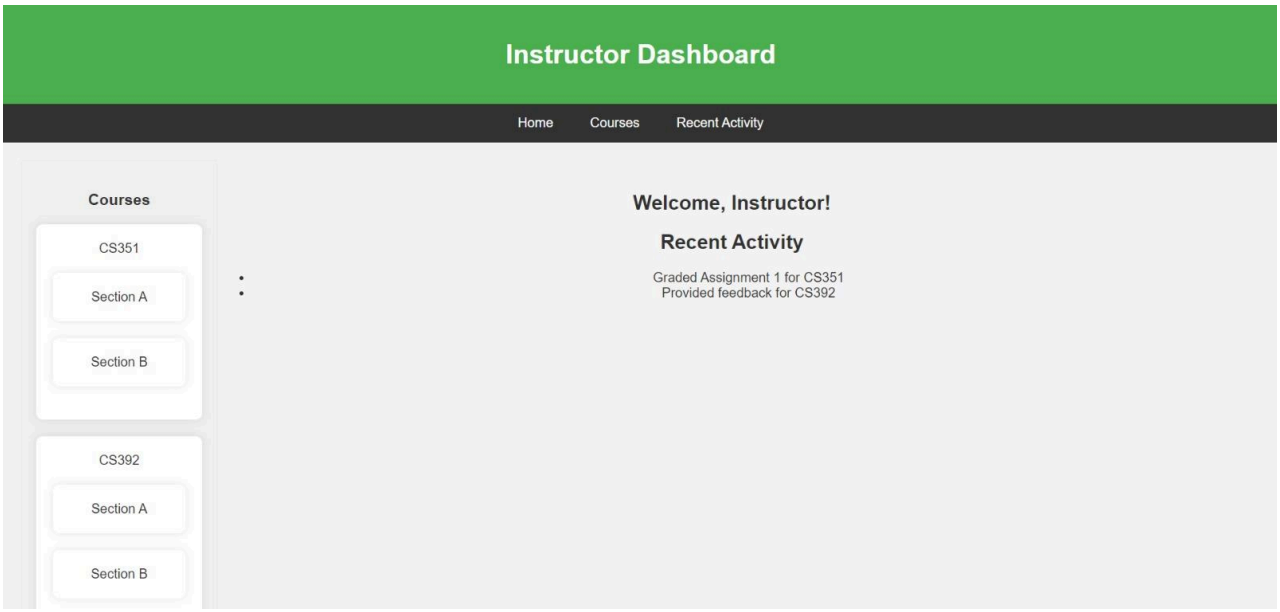


The Home Page serves as the entry point for both instructors and students. It features:

- A welcoming header.
- Navigation links to the Instructor and Student dashboards.
- Brief descriptions and access buttons for each user type.

- An embedded calendar to keep track of important dates.

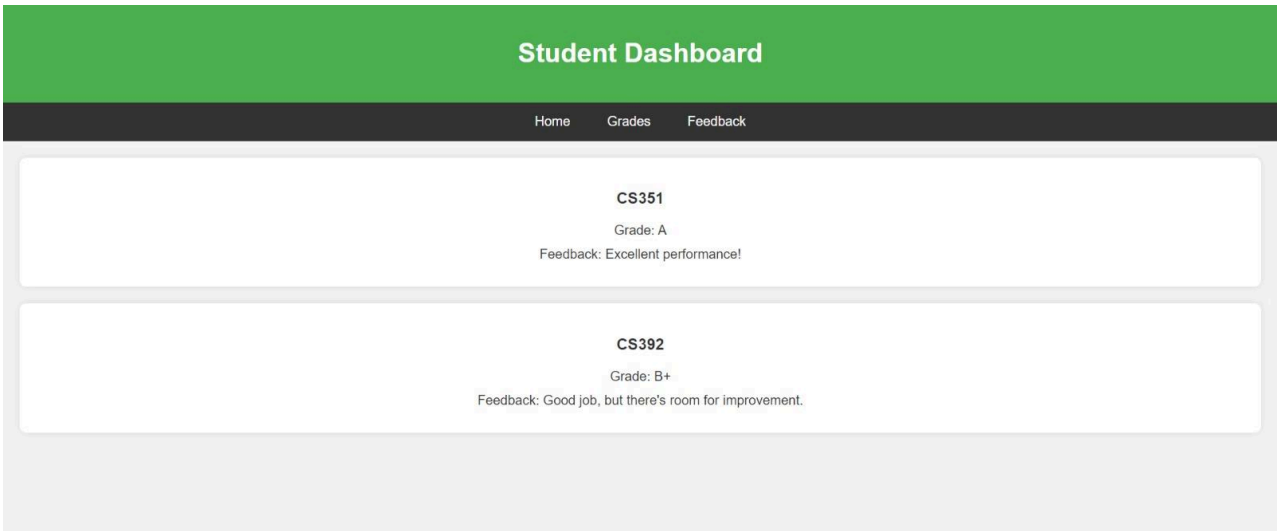
Instructor Dashboard



The Instructor Dashboard provides:

- A sidebar listing all the courses and their respective sections.
- A main content area displaying recent activities and actions taken by the instructor.
- An interface designed to help instructors manage courses, grade assignments, and provide feedback efficiently.

Student Dashboard



The Student Dashboard includes:

- A header and navigation links consistent with the other pages.

- A main content area displaying the student's grades and feedback for each course.
- An interface that allows students to easily track their academic performance.

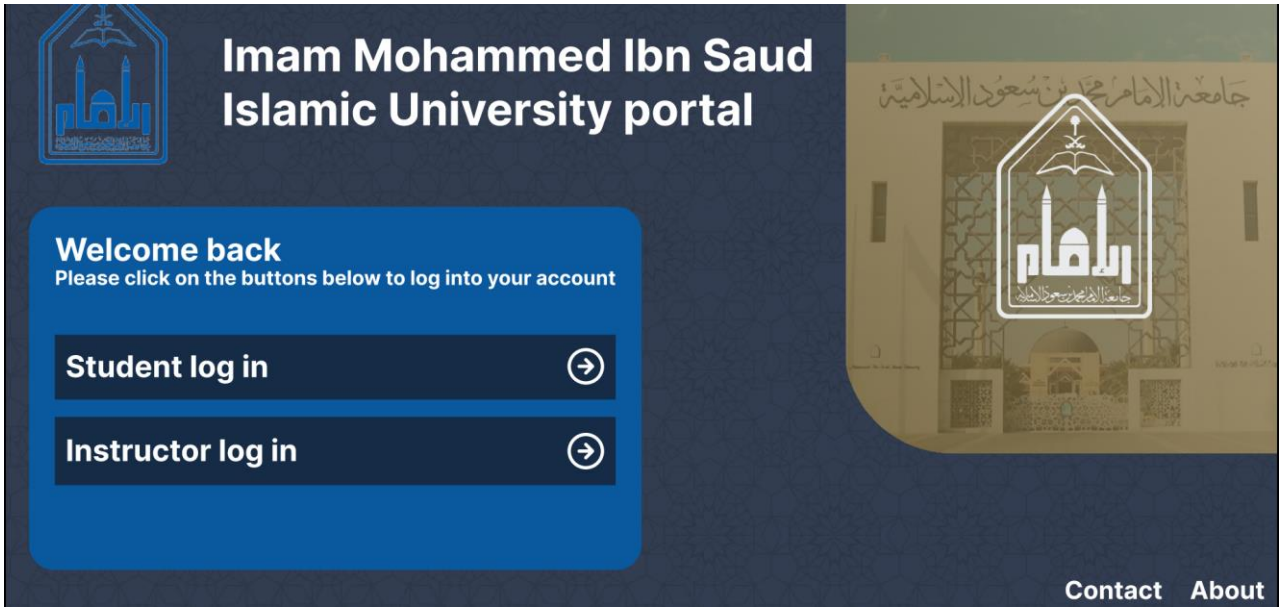
Design (high-fidelity Prototyping)

Overview

The home page for the Imam Mohammed Ibn Saud Islamic University portal is designed to provide a welcoming and intuitive entry point for both students and instructors. The design features a clean and modern interface, incorporating the university's colors and branding elements. The primary goal is to facilitate easy navigation and quick access to the login portals for students and instructors.

Illustrations

Home Page Elements



- **Header:** Displays the university logo and name prominently at the top of the page.
- **Welcome Section:** Contains a welcome message and instructions for logging in.
- **Login Buttons:** Clearly marked buttons for student and instructor login, each with an associated icon for quick identification.
- **Embedded Calendar:** A calendar section to help users keep track of important dates and events.
- **Footer:** Includes links to the contact page and about page.

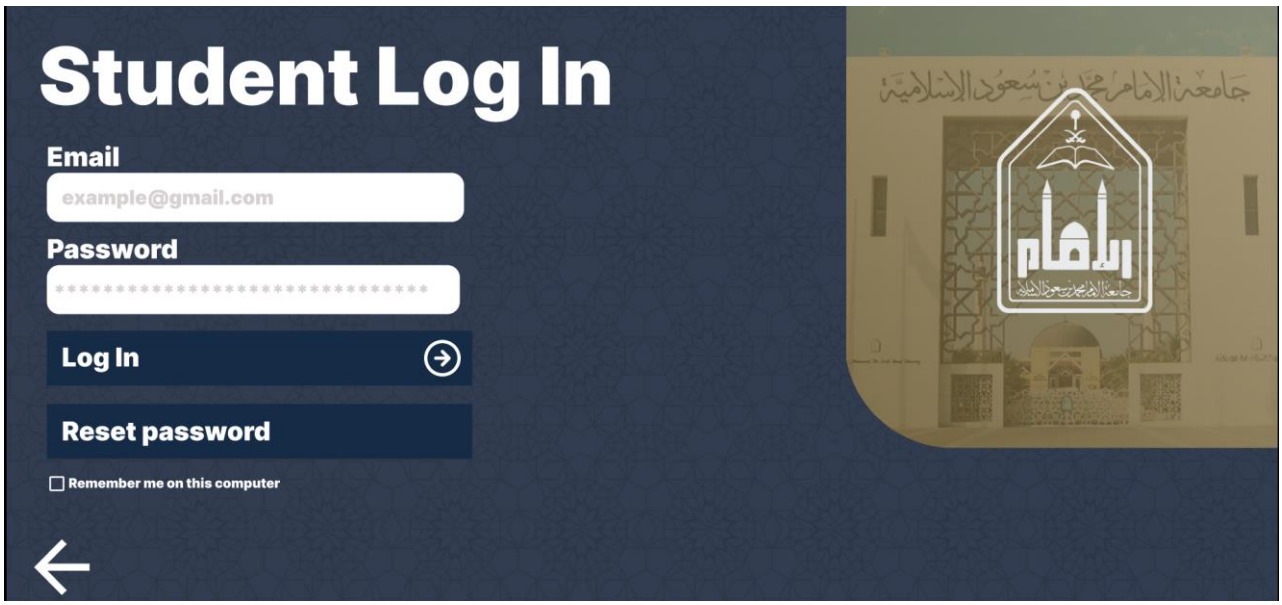
Student Login Page Design Presentation

Overview

The student login page for the Imam Mohammed Ibn Saud Islamic University portal is designed to be straightforward and user-friendly. It incorporates the university's branding and color scheme, providing a seamless and consistent user experience. The design is aimed at ensuring ease of access while maintaining a professional and modern aesthetic.

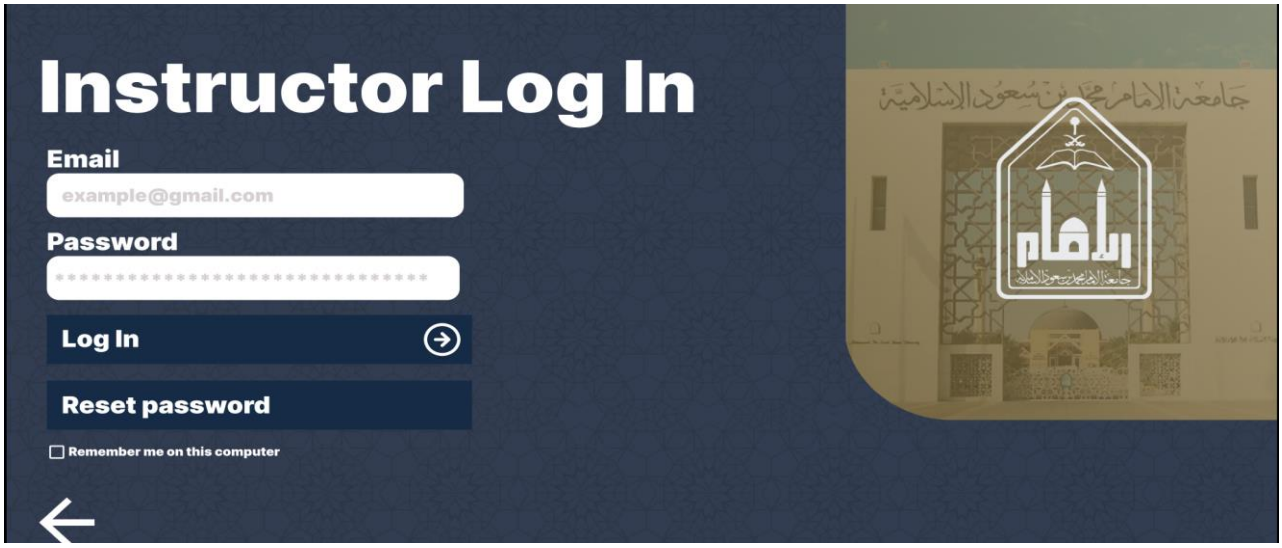
Illustrations

Student Login Page Elements



- **Header:** Large, bold text displaying "Student Log In."
- **Login Form:** Input fields for email and password.
- **Login Button:** Prominent button for logging in.
- **Reset Password:** Option to reset the password.
- **Remember Me:** Checkbox to remember the user on the computer.
- **Back Button:** Icon to navigate back to the previous page.
- **Background and Logo:** The right side of the page features the university logo and a background image of the university building.

Instructor Login Page Design Presentation



Overview

The instructor login page for the Imam Mohammed Ibn Saud Islamic University portal is designed to be straightforward and user-friendly. It incorporates the university's branding and color scheme, providing a seamless and consistent user experience. The design ensures ease of access while maintaining a professional and modern aesthetic.

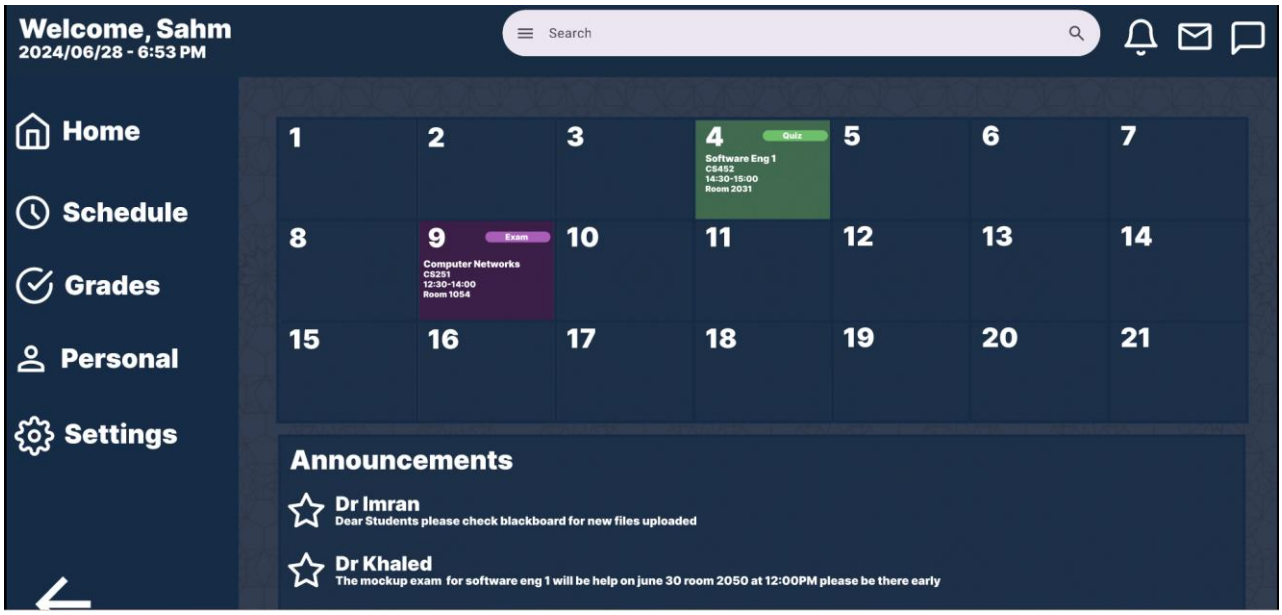
Illustrations

Instructor Login Page Elements

1. **Header:**
    - Large, bold text displaying "Instructor Log In."
2. **Login Form:**
    - **Email Field:** Input field for email.
    - **Password Field:** Input field for password.
3. **Login Button:**
    - Prominent button labeled "Log In."
4. **Reset Password:**
    - Option to reset the password.
5. **Remember Me:**
    - Checkbox to remember the user on the computer.
6. **Back Button:**
    - Icon to navigate back to the previous page.

7. **Background and Logo:**
    - The right side of the page features the university logo and a background image of the university building.

Student page View:



- The main view displays a grid layout representing the days and weeks.
- Dates are clearly marked and highlighted for the current day.
- Events are displayed within the date blocks, potentially with color coding for different categories (e.g., classes, exams, meetings).

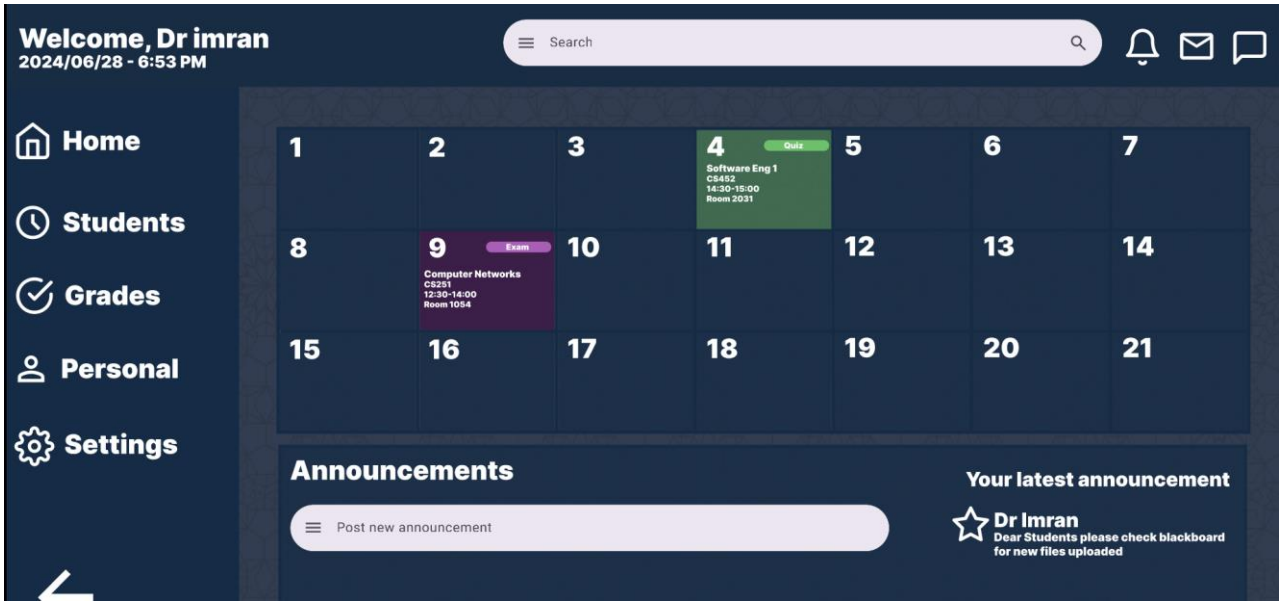
Navigation:

- Buttons or arrows might be present to navigate between months or years.

Additional Elements:

- Depending on the application's features, there might be sections for:
    - Adding or editing events
    - Viewing event details
    - Setting reminders or notifications

Instructor page View:

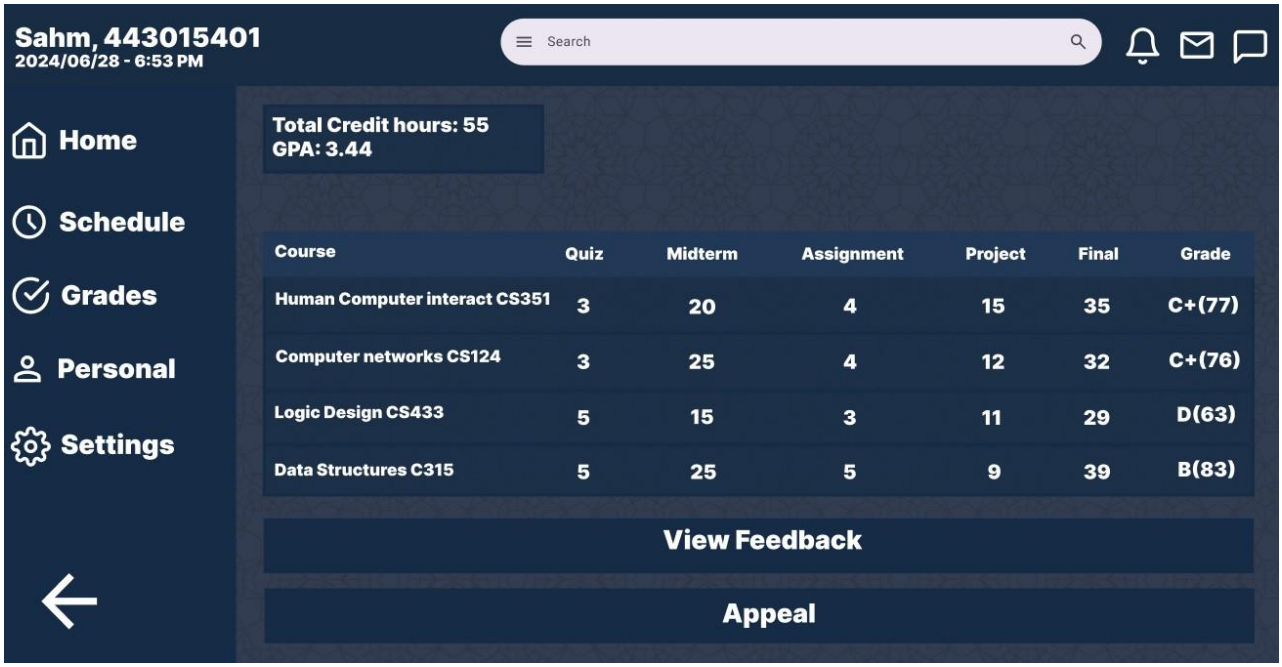


The image is a screenshot of a calendar application on a doctor named Imran's tablet. The date at the top of the calendar is Friday, June 28th, 2024 at 6:53 pm.

The calendar shows a schedule for the week of June 23rd to June 29th, 2024. There are no classes scheduled for Dr. Imran on this view of the calendar.

The bottom of the calendar is divided into four sections: Students, Grades, Personal, and Settings. The "Students" section is selected. Within the "Students" section, there is a subsection for "Announcements." It displays an announcement from Dr. Imran to his students, telling them to check Blackboard for new files uploaded.

Student information system,:



The image is a screenshot of a student information system, likely a grade portal. It shows a summary of a student's grades for four courses, presumably for the summer term of 2024.

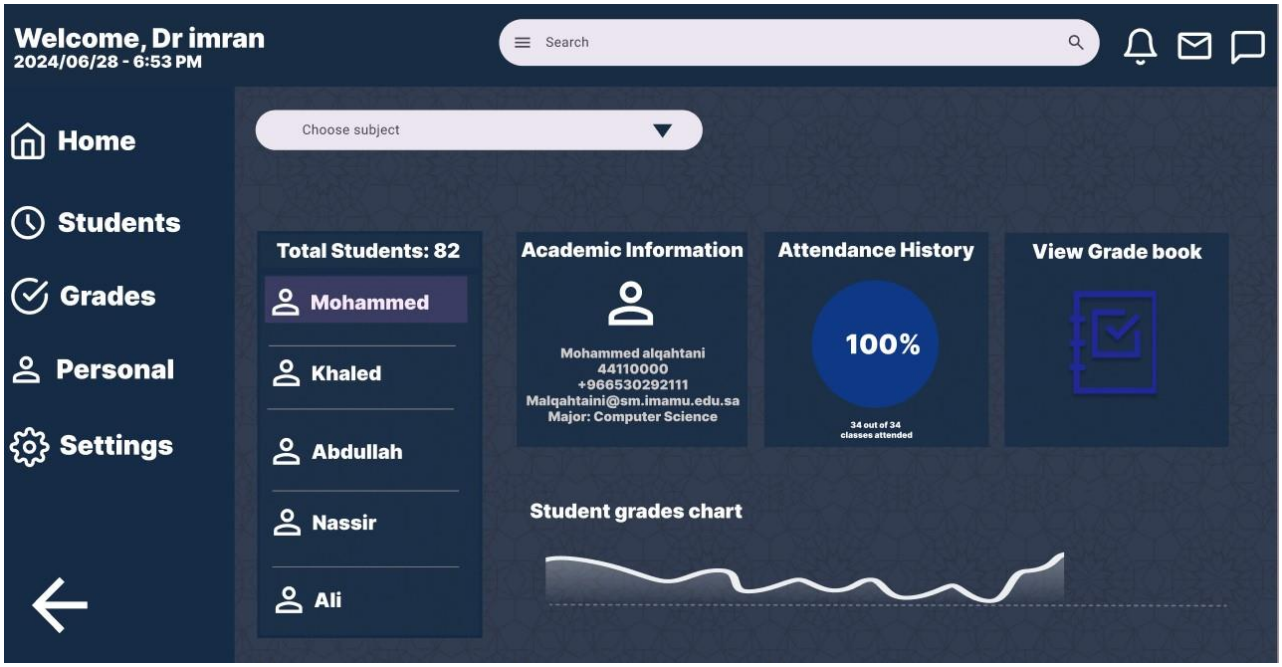
At the top of the page is the student's name, Sahm, and a student ID number, 443015401. There is also a search bar in the top right corner of the page.

Below the student information, there is a section labeled "Total Credit Hours: 55" and another labeled "GPA: 3.44".

The main body of the page is a table with a heading "Grades". The table has six columns:

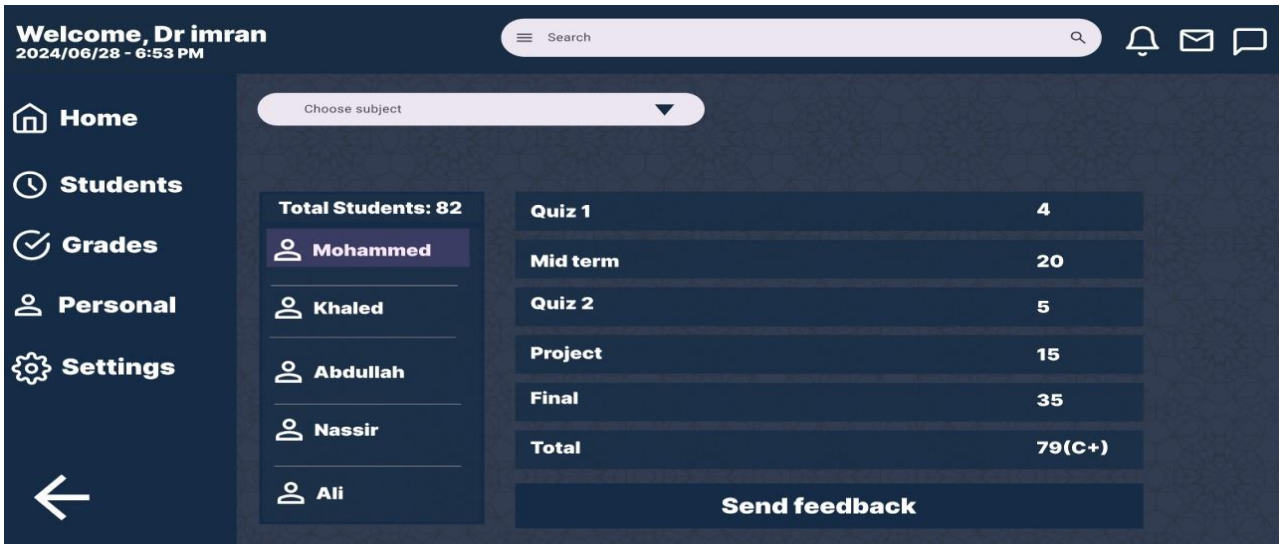
- **Course** - This column lists the name of the course.
- **Quiz** - This column shows the grade received on a quiz, possibly out of 100.
- **Midterm** - This column shows the grade received on a midterm exam, possibly out of 100.
- **Assignment** - This column shows the grade received on an assignment.
- **Project** - This column shows the grade received on a project.
- **Final** - This column shows the grade received on the final exam, possibly out of 100.
- **Grade** - This column shows the final letter grade for the course.
- **View Feedback** – in here the students could see the feedback from the instructor
- **Appeal Process** - Establish a clear process for students to appeal grades if they believe there has been an error or if they disagree with the assessment.

Instructor information system,:



- Information about a specific course, including the syllabus, assignments, or announcements.
- The student's academic history, including transcripts from previous semesters.
- The student's financial aid information.
- Contact information for advisors or other academic resources.
- Student Performance Statistics: Track trends in student performance over time to identify areas of strength and weakness in the curriculum

Degree Overview:



Feedback Mechanism: Provide constructive feedback along with grades to help students

Design Evaluation

Advantages

- **User-Friendly Interface:** The clean layout and consistent color scheme make the system easy to navigate for both instructors and students.
- **Responsive Design:** The interface is designed to be responsive, ensuring it looks good on various devices and screen sizes.
- **Embedded Calendar:** The calendar helps users keep track of important dates and deadlines.
- **Clear Navigation:** The navigation links and buttons are prominently displayed, making it easy for users to find what they need.

Disadvantages

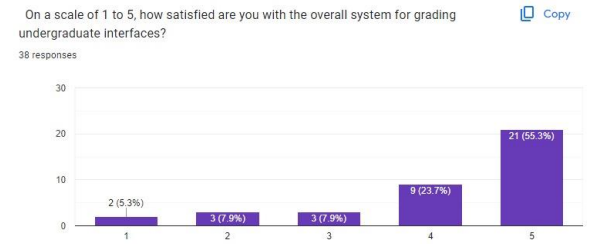
- **Basic Functionality:** The current prototype includes basic features and may require additional functionalities such as notifications, detailed grade reports, and messaging systems.
- **Limited Customization:** Users might need more customization options to tailor the interface to their specific needs.

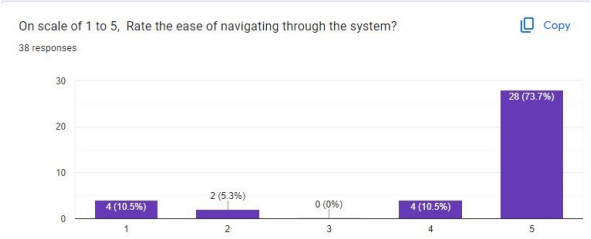
Alignment with Requirements

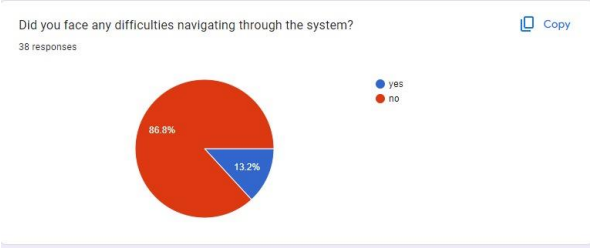
The design aligns well with the initial requirements of providing an interface for instructors to manage grades and feedback and for students to track their performance. The inclusion of a calendar and clear navigation further enhances usability.

Feedback statistic from potential users:

A survey was sent to various students who would benefit from the system.







Conclusion

This project provided us with an experience as it involved creating a system with perspectives. It prompted us to think about factors such, as fairness, efficiency and transparency for each perspective. We faced challenges, in designing, implementing and evaluating both interfaces incorporating elements that we strived to adhere to. The hands on experience gained from this project was truly rewarding and collaborating with our team members was an experience.

Tools:

- Figma

References:

- https://www.geeksforgeeks.org/introduction-to-human-computer-interface-hci/