Human Computer Interaction

Assignment 2

Shubham Goyal

Part A: Procedure for NeedFinding

Q1. Who are the end users (audience) of the app you designed the prototype for?

The primary audience for the "Sheridan Courses App" includes:

1. **Full-Time/Part-Time College Students (Ages: 18–30):**
   - Tech-savvy, familiar with smartphones and mobile apps.
   - Expect quick access to course information, grades, and communication tools.

2. **Continuing Education Students (Ages: 45+):**
   - Usually less tech-savvy, possibly dealing with vision challenges such as colour blindness.
   - Need straightforward navigation, larger fonts, high-contrast design.

3. **Faculty Members:**
   - Instructors who upload course contents, grade assignments and communicate with students.
   - Their interface needs to be slightly different than that of students

Q2. What should you consider for each group of audience for your app?

Varied features and interface elements can be implemented for each user group as listed below:

1. **Full-Time/Part-Time College Students (Ages: 18–30):**
    - **Instant Communication & Notifications**: Quick push notifications about newly added course content, upcoming assignment deadlines, grade updates and group chat updates.
    - **Mobile-Friendliness**: Students often multitask and access apps on the go. Interface must be responsive and easy to use on smaller screens.
    - **Social & Collaborative Tools**: Group chats, peer mentor interaction and group project coordination.

2. **Continuing Education Students (Ages: 45+):**
    - **Simplicity & Clarity**: Minimize clutter and non functional images, use intuitive icons and limit complicated menus.
    - **Readability**: Larger text size, good colour contrast for potential visual impairments or colour blindness.
    - **Assisted Navigation**: Clear instructions for each menu and button along with short tutorials for first-time users.
    - **Inclusive Language**: Avoid too much slang tongue that might confuse the older or international students.

3. **Faculty Members:**
    - **Dashboard for Course Management**: Ability to see assignment submissions, communicate with students, post updates.
    - **Analytics / Monitoring**: Quick overview of student progress or participation.
    - **Time Efficiency**: Tools that reduce repetitive tasks such as one-click assignment grading.

Q3. Find similar successful apps (minimum 5 apps) to your application, and investigate what users liked or disliked about the application. Mention top five apps almost similar to yours.

Pulse by D2L (Used by Sheridan)

Pros:

- Seamlessly connects to D2L Brightspace LMS.
- Provides real-time push notifications for announcements, grades, and upcoming deadlines.
- Offers a timeline view making it easy to see weekly tasks at a glance.

Cons:

- Doesn't offer a robust built-in chat or discussion feature.
- Some older learners found navigating the app content and settings confusing with no tutorials/instructions.
- Clicking on push notifications takes forever to load the same content in the app resulting in occasional crashing.

Canvas Student

Pros:

- Sleek, user-friendly interface.
- Easy submission of assignments (supports files, images, videos).
- "**SpeedGrader**" for instructors speeds up the feedback process.

Cons:

- Doesn't offer a robust built-in chat or discussion feature.
- Some older learners found navigating the app content and settings confusing with no tutorials/instructions.

Google Classroom

Pros:

- Seamless integration with Google tools (Docs, Drive, Meet).
- Simple interface for assignment distribution and submissions.
- Real-time collaboration on documents.

Cons:

- Lacks advanced LMS features such as detailed gradebooks.
- Limited offline functionality.

Blackboard

Pros:

- Real-time alerts for grades, announcements, and deadlines.
- Offline access to course materials.
- Integrated calendar and grade tracker.

Cons:

- Interface felt clunky compared to the other apps which might be a turn off for continuing education students.
- Limited customization for notifications.
- Occasional syncing issues with the desktop LMS.

Microsoft Teams for Education

Pros:

- Seamless access to Word, Excel, PowerPoint, OneNote, and Class Notebook for real-time collaboration.
- Embed apps like **Jira**, **Kahoot**, **Trello**, or other web tools directly into Teams channels as tabs.
- Host virtual lectures with breakout rooms, screen sharing, and recording.
- Distribute, collect, and grade assignments with rubrics and feedback tools.
- Syncs across devices and integrates with LMS platforms such as Canvas for hybrid setups.

Cons:

- Overwhelming for users seeking simple LMS-focused features (e.g., Pulse's deadline-centric design).
- Adding third-party apps like Jira often requires IT/admin permissions or licenses.
- Channels, chats, and assignments can clutter notifications without careful customization.
- Lacks built-in gradebooks, detailed analytics, or course templates compared to dedicated LMS apps.

Q4. What examples of latent needs can you think of?

1

Auto-Scheduling / Reminder

A smart assignment reminder that syncs automatically to their phone calendar addresses a major latent need.

2

Offline Content Caching

Students with limited internet access often screenshot pages. They might not explicitly request an offline mode, but it solves a major inconvenience they experience, especially if they commute or have unreliable connectivity.

3

Universal Course Chat Translation

Since Sheridan has many international students, the app could **auto-translate** group chat messages. Users may not actively request it, but it solves language-barrier problems they "work around" now.

4

Customizable User Interface and Dashboard

A flexible user interface that allows users to personalize their dashboard by rearranging elements like courses, assignments, announcements, and calendar events, as well as adjusting text sizes, colour schemes (including dark mode), and overall layout.

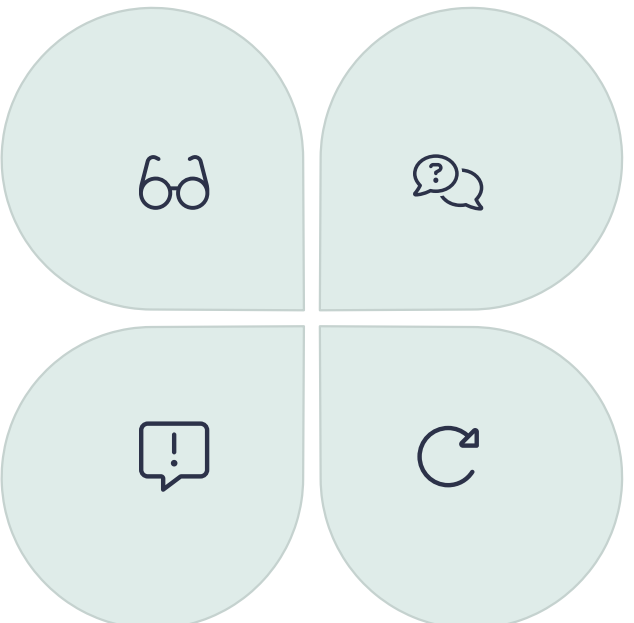
Q5. What are good ways of finding latent needs?

Watching People in Action

Shadowing users interact with a product or perform relevant tasks can help observe behavioural patterns of end users while using the app.

User Surveys

Collecting feedback through short, anonymous surveys can reveal user specific requirements for the app.



One-on-One Chats

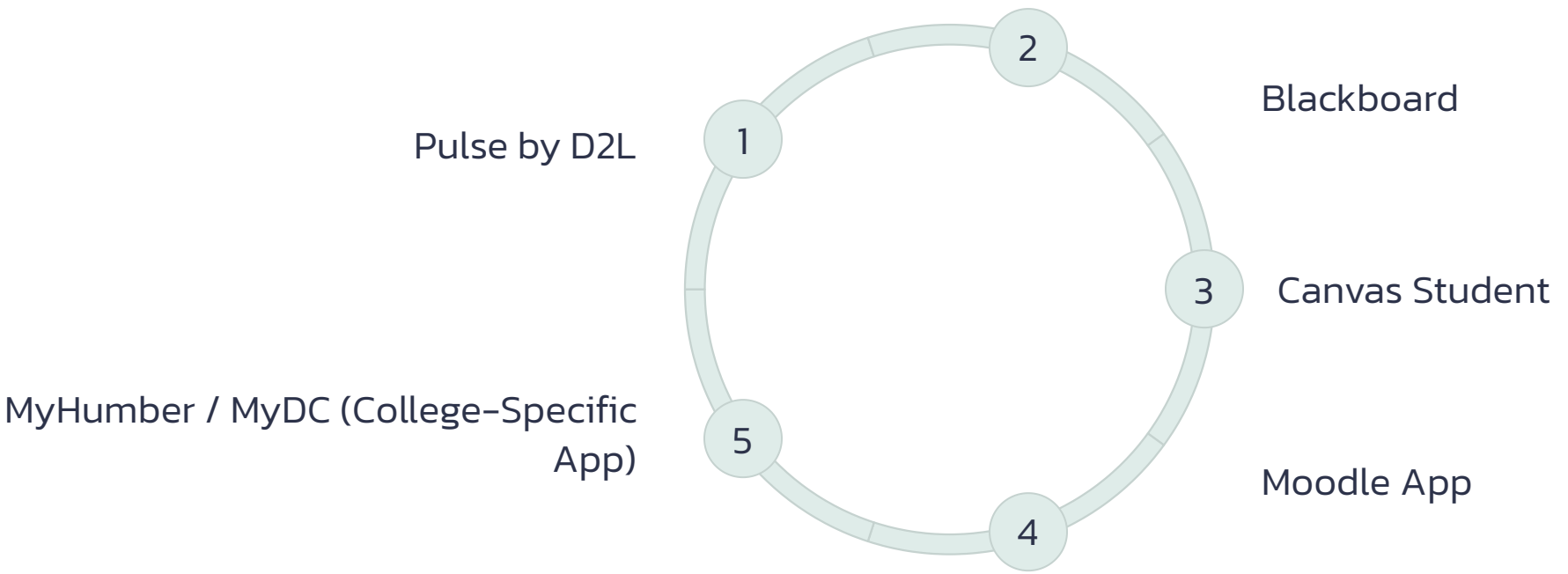
Asking users follow-up questions about their actions while they use the app can help reveal hidden frustrations and unspoken needs.

Checking Workarounds

Noticing how users try to fix missing features on their own can show developers what improvements are needed in the product.

Part B: Procedure for NeedFinding

For the analysis, I selected the following mobile apps, which are widely used by Canadian colleges and universities and have similar course management and communication themes as my Sheridan Courses App:



Core Features Identified For Grading:

1. **Course Listing & Details**
   How courses are displayed and detailed.
2. **Assignment Management**
   Tools for submitting, tracking, and receiving feedback.
3. **Group Chat**
   A built-in chat for each course and program.
4. **Notification System**
   Real-time alerts for deadlines, announcements, etc.
5. **Calendar Integration**
   Automatic syncing of due dates and events.
6. **Customizable Dashboard**:
   Personalization options for the user interface.
7. **Offline Content Access**
   Ability to download and view course materials without an active connection.
8. **Visual Design & Overall UX**
   The aesthetics, ease-of-use, and performance of the app.

Competitor Analysis Matrix

Feature	Weight	Pulse	Blackboard	Canvas	MS Teams for Education	Google Classroom	Sheridan Course App
Course Listing & Details	10	10	10	10	10	10	10
Assignment Management	10	10	10	10	10	10	10
Group Chat	10	0	0	5	5	0	10
Notification System	8	8	8	8	8	8	8
Calendar Integration	7	0	0	3	3	0	7
Customizable Dashboard	6	0	0	3	3	3	6
Offline Content Access	5	0	2	2	2	0	5
Visual Design & Overall UX	10	7	6	8	7	6	9
Total Points	66	45 / 68%	44 / 67%	51 / 77%	50 / 76%	43 / 65%	65 / 98%

UX/HCI Issues Identification

1

Pulse

- Lacks a robust group chat feature.
- Navigation for advanced settings is often confusing for less tech-savvy users.

2

Blackboard

- The interface feels outdated and can be cluttered.
- Users report slow performance and occasional crashes on older devices.

3

Canvas

- Inconsistencies in the layout across different modules.
- Limited customization options for personal preferences.

4

MS Teams for Education

- While offering powerful collaboration tools, the sheer number of features can overwhelm users.
- Some users find it less intuitive for educational content management compared to its business counterpart.

5

Google Classroom

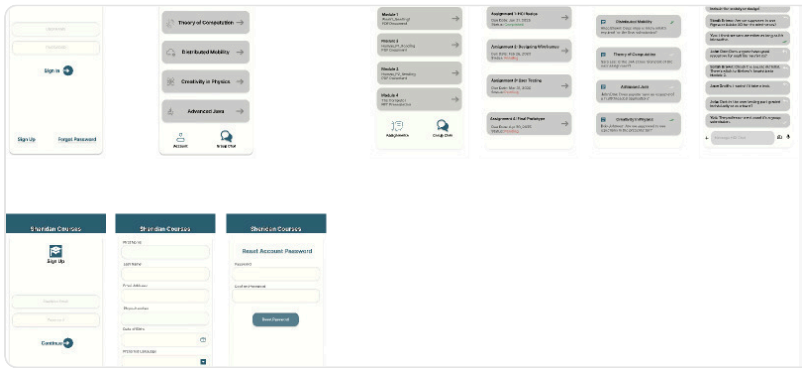
- Primarily functions as a simple portal, lacking advanced course management features.
- Visual design is basic, and calls-to-action can sometimes be hard to distinguish.

Design Principles & Heuristics Evaluation

After watching the "Design Principles & Heuristics" video, I re-evaluated my initial prototype using a scale of 1 to 5 (where 1 is the worst and 5 is the best). My scores are as follows:

Design Principle	Score (1-5)	Explain your method for improving the design principle for your app, if not applicable please write N/A
Discoverability	4	Improve by adding clear labels, tooltips, or onboarding hints so users can quickly locate all features.
Simplicity	4	Streamline menus and reduce unnecessary options to make the interface even more straightforward.
Affordances	3	Enhance visual cues on buttons such as shadows or hover states to indicate their functionality
Mapping	4	Adjust the layout so controls align more closely with user expectations for task flow and interaction.
Perceptibility	4	Increase contrast and font clarity to ensure that all text and icons are easily distinguishable for all users
Consistency	4	Standardize colors, fonts, and layout patterns across screens to improve the overall cohesive feel.
Flexibility	3	Introduce customization options such as adjustable font sizes to better accommodate different user needs.
Equity	1	Ensure accessibility standards such as screen reader support are fully met to serve all users.
Ease	4	Maintain this simplicity while gradually adding advanced features.
Comfort	4	Offer adjustable settings like dark mode or text scaling to enhance user comfort during extended use.
Structure	3.5	Refine the information hierarchy by clearly grouping related functions to guide users more efficiently.
Constraints	1	Implement more robust input validation and error prevention measures to limit user mistakes.
Tolerance	1	Improve error recovery processes so that the app gracefully handles mistakes and offers clear solutions.
Feedback	4	Provide immediate, descriptive feedback (visual or auditory) for user actions to enhance confidence and clarity.
Documentation	3	Include contextual help, FAQs, or a quick-start guide within the app to support users in learning its features.
Average	3.166666667	

Part 3: Second Figma Prototype Link



Figma

Assignment2_HCI_ShubhamGoyal

Created with Figma

Part 4: Github Repository Link

goyashub/**Sheridan-Courses-App**

The Sheridan Courses App is a Figma prototype designed for easy course management. It features course listings, assignment tracking, group...

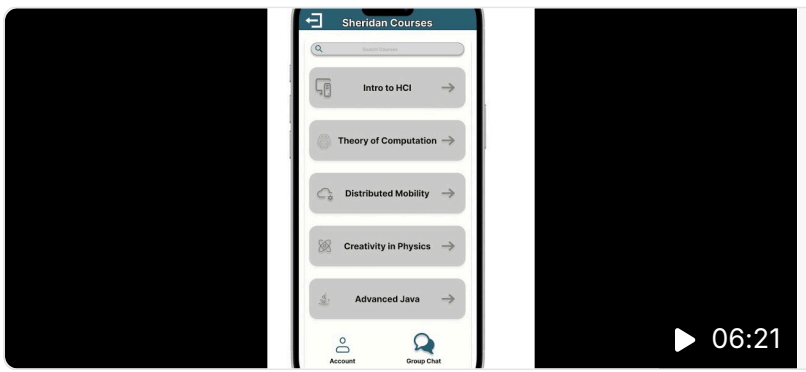
1 Contributor | 0 Issues | 0 Stars | 0 Forks

GitHub

GitHub - goyashub/Sheridan-Courses-App: The Sheridan Courses Ap...

The Sheridan Courses App is a Figma prototype designed for easy course management. It features course listings, assignment tracking, group chats, and...

Part 5: Youtube Video Link



YouTube

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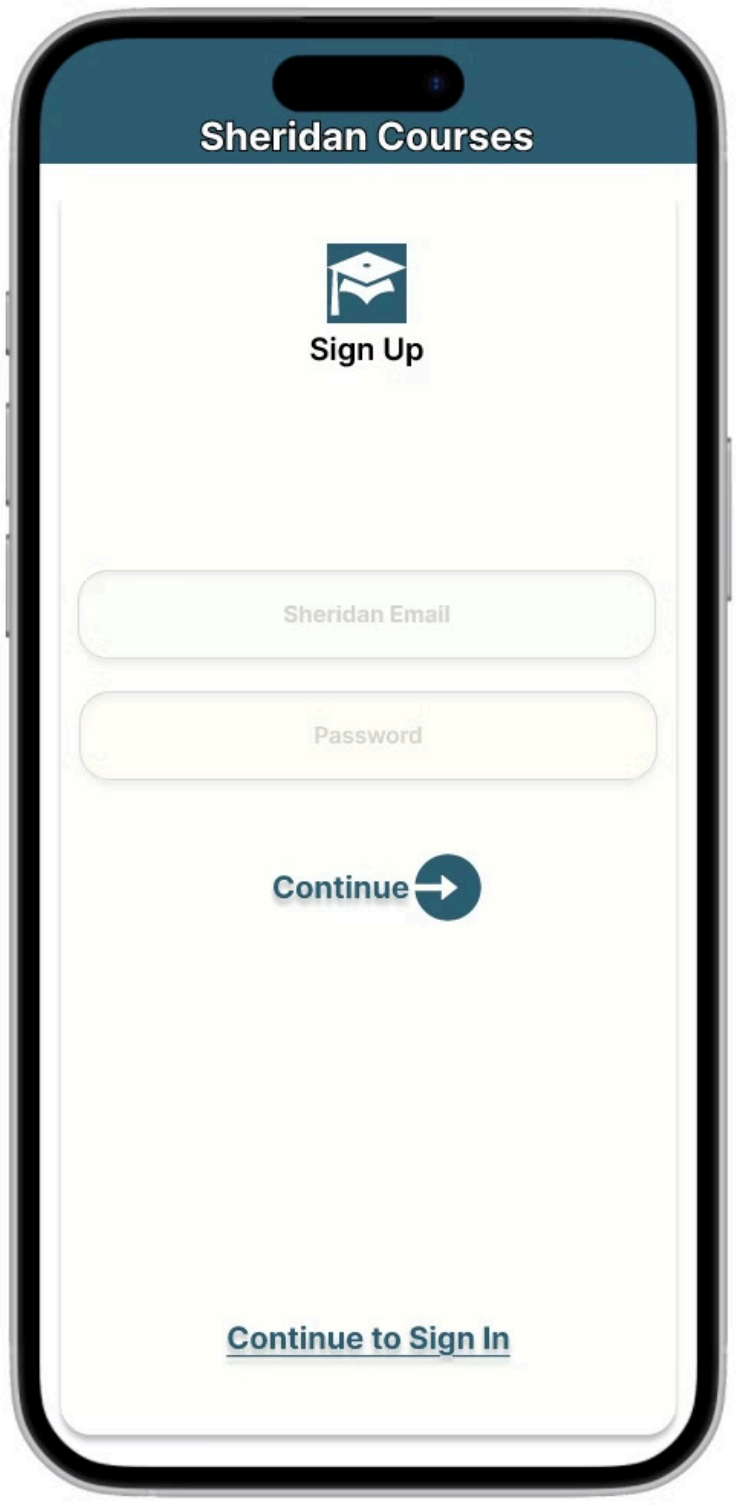
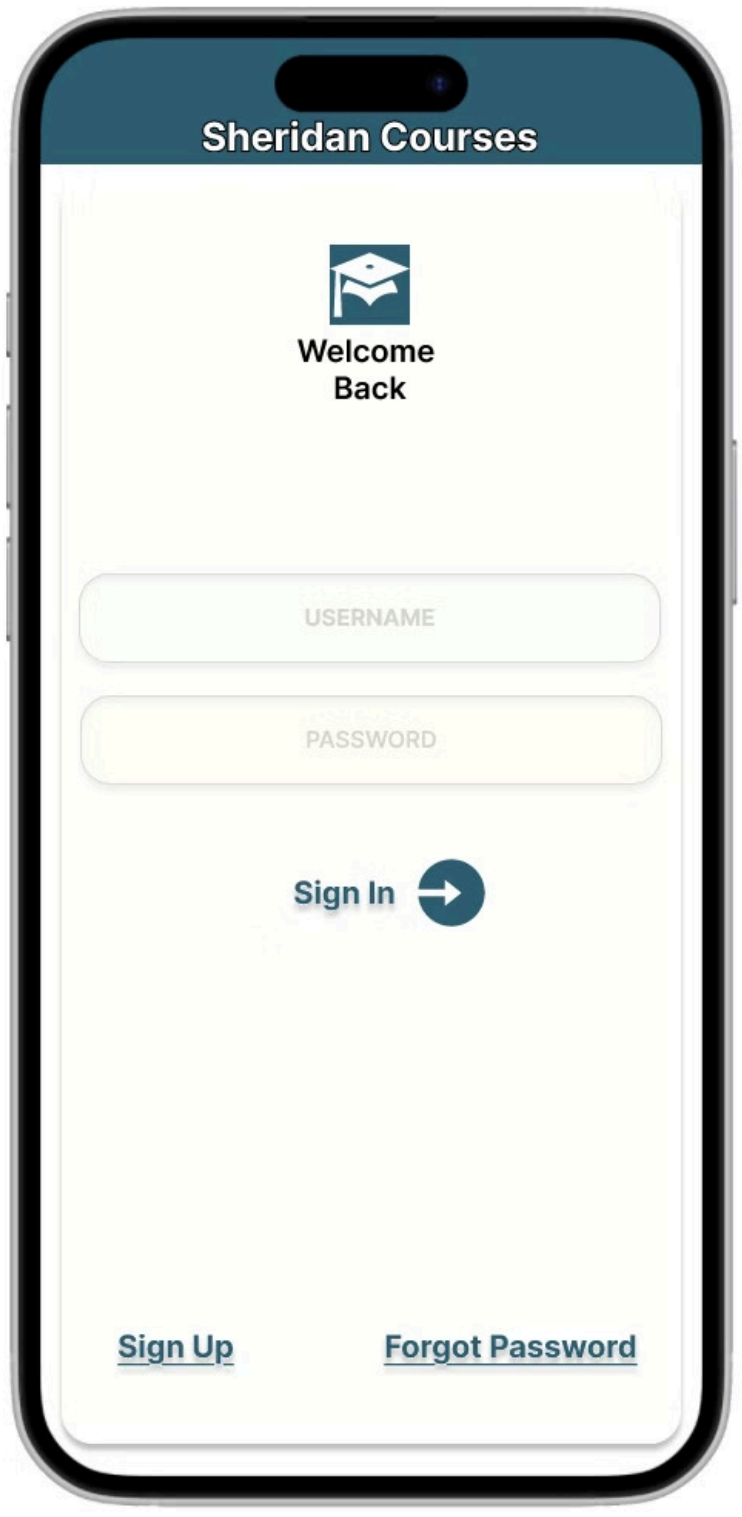
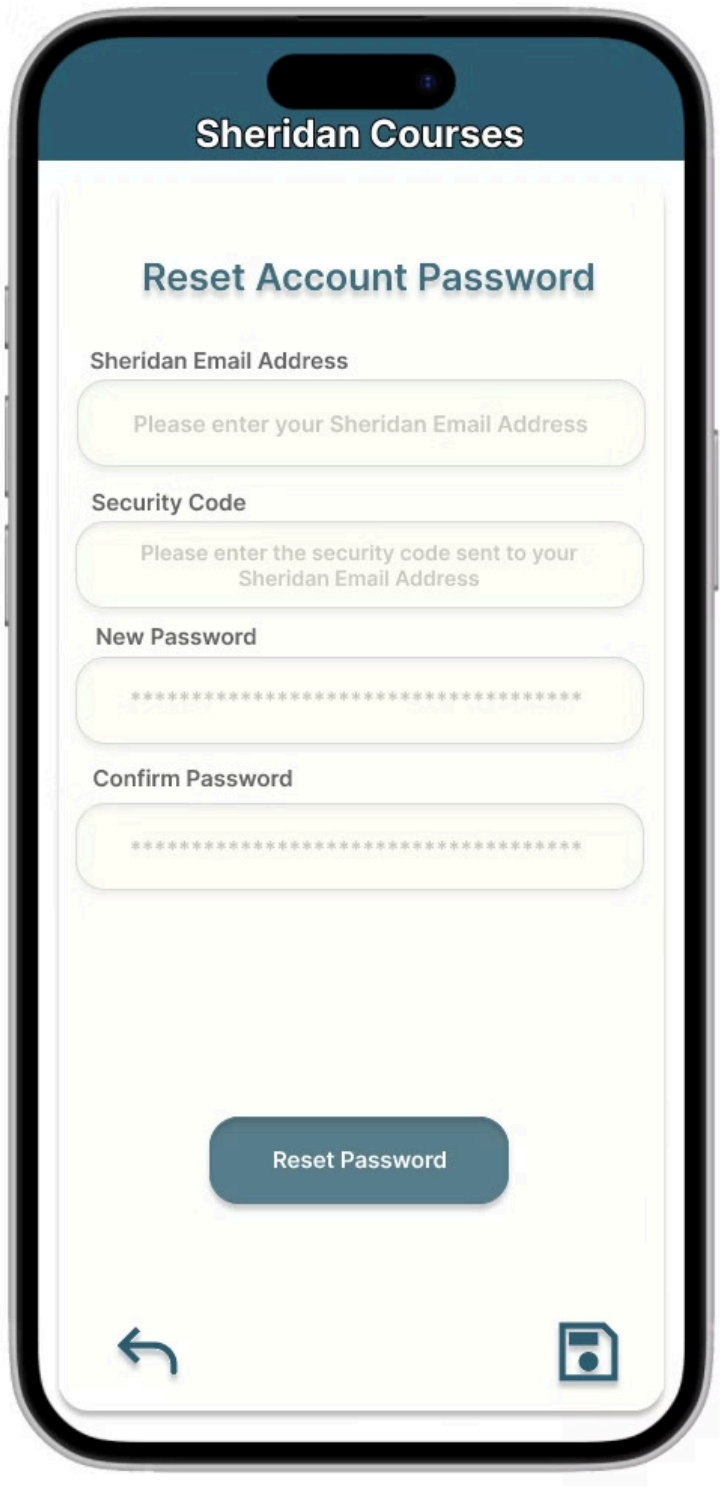
Sign In Page


Sheridan Courses
Sign Up
Sheridan Email
Password
Continue
Continue to Sign In

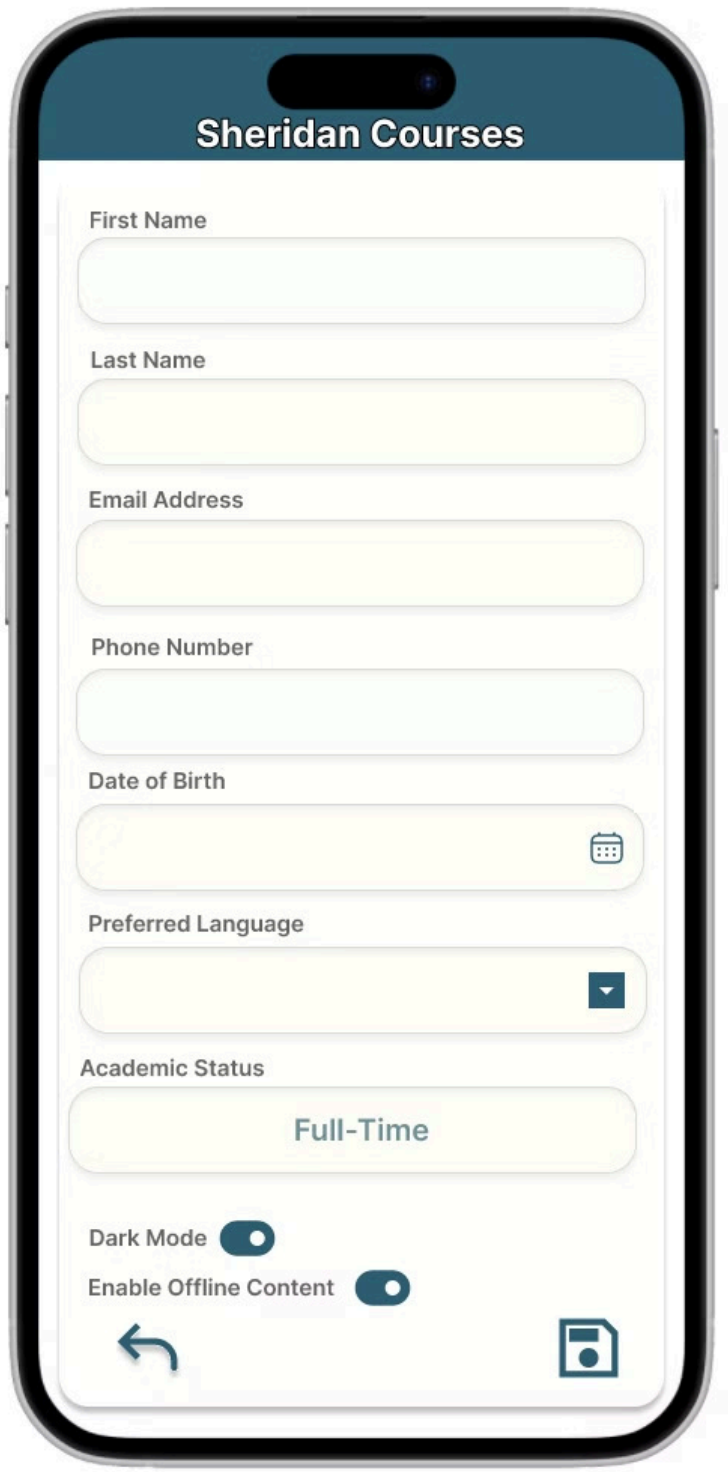
Sign Up Page


Sheridan Courses
Welcome
Back
USERNAME
PASSWORD
Sign In
Sign Up
Forgot Password

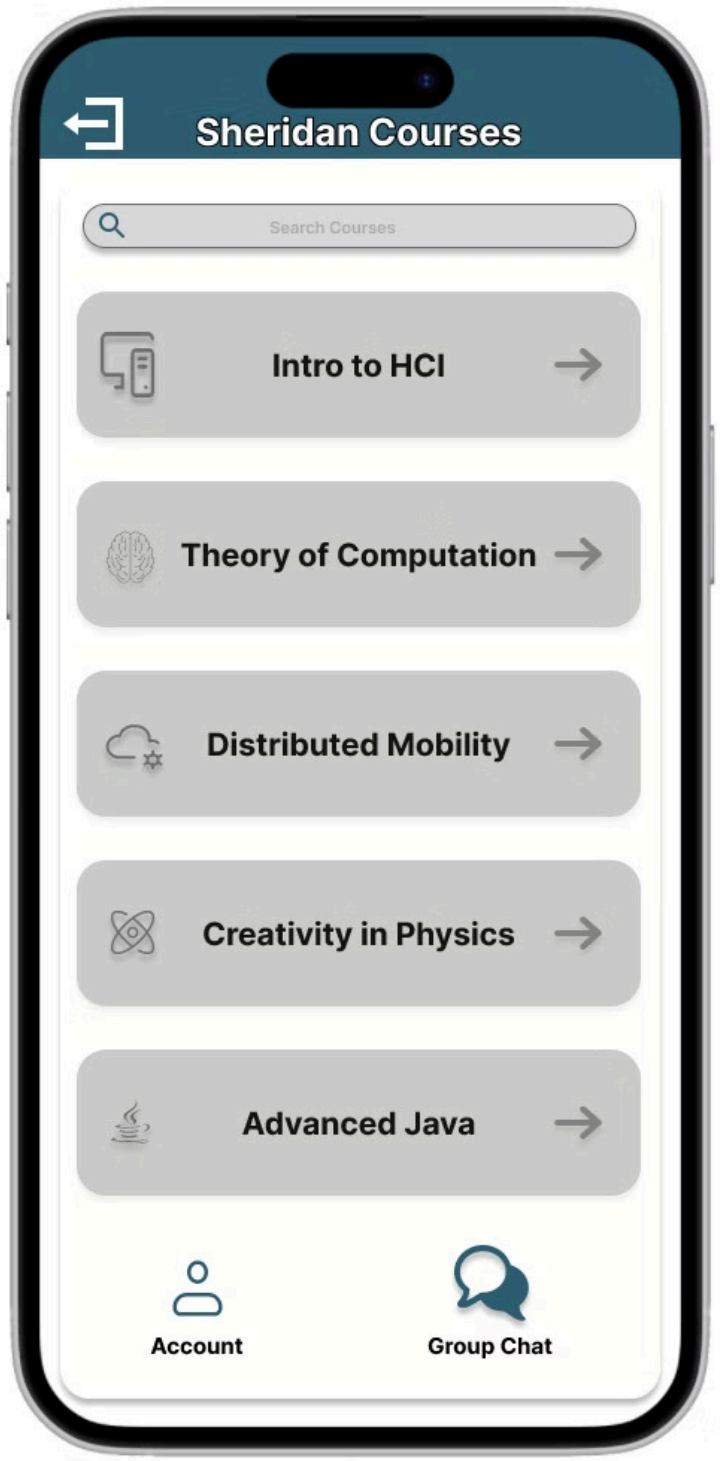
Password Reset Page



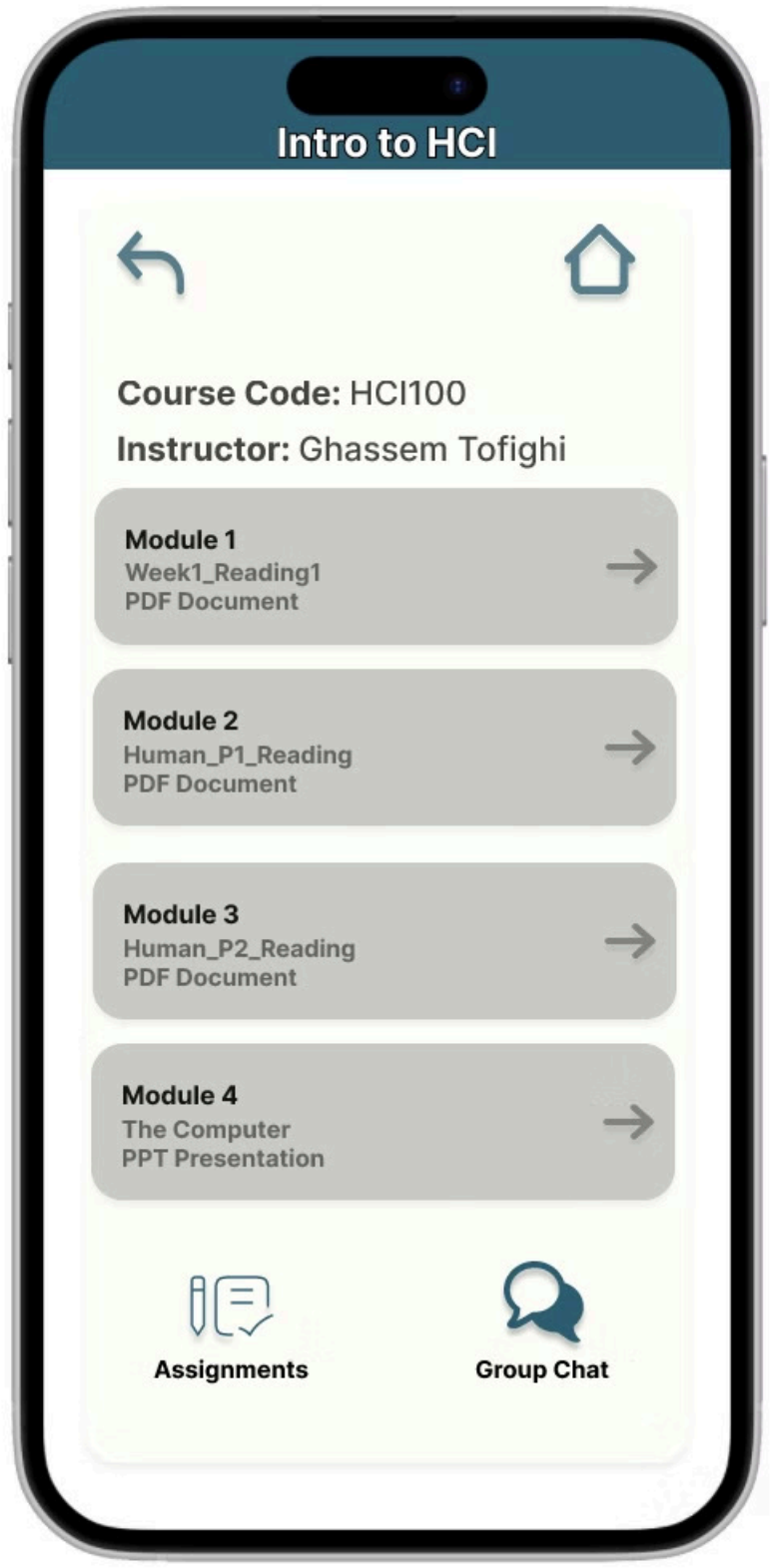
Account Page



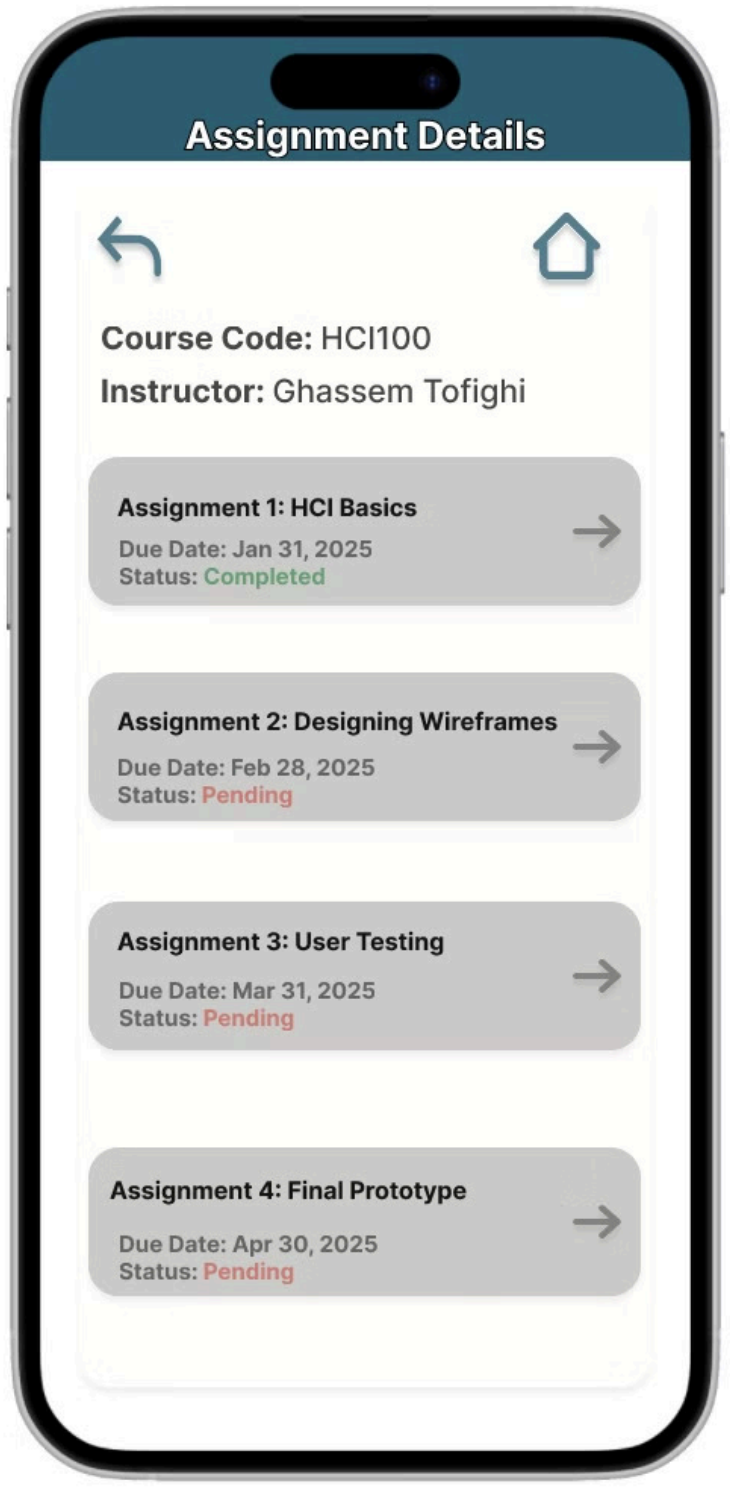
Courses Home Page



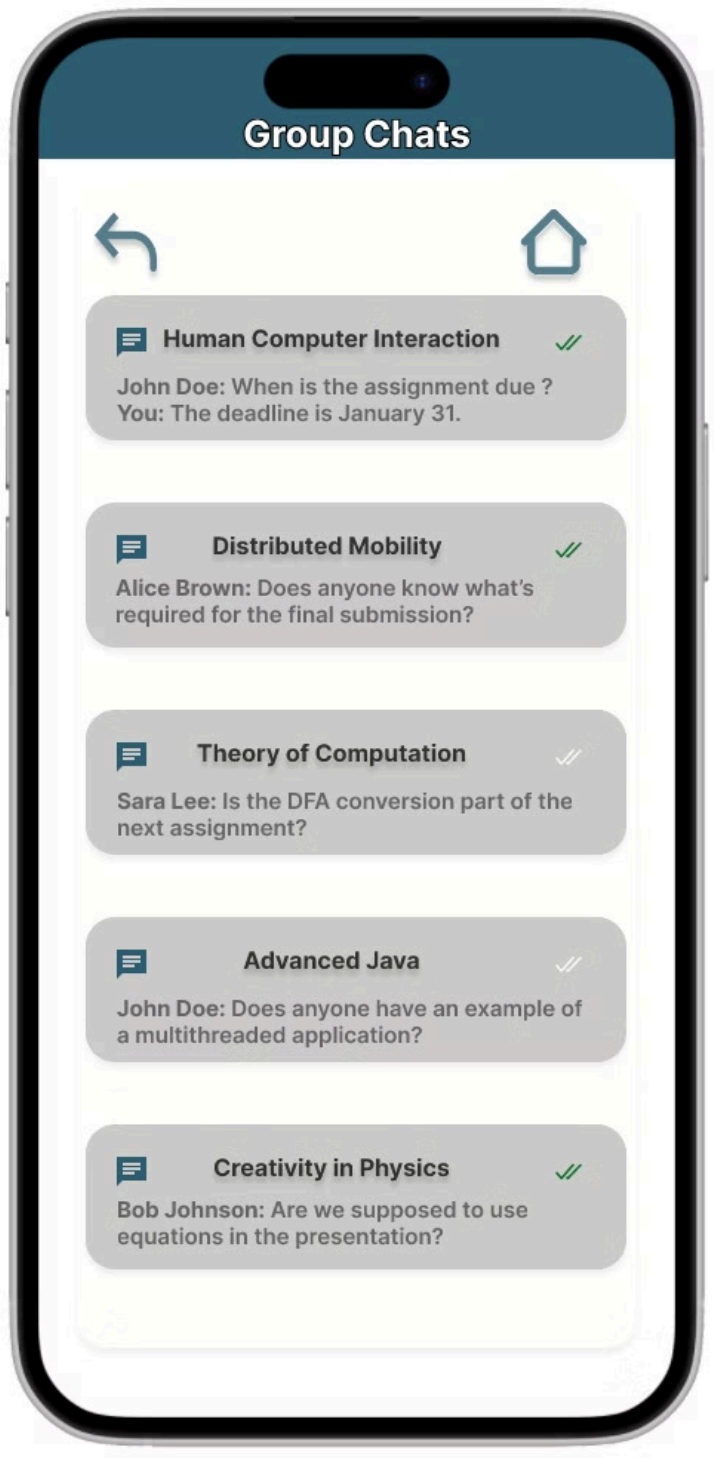
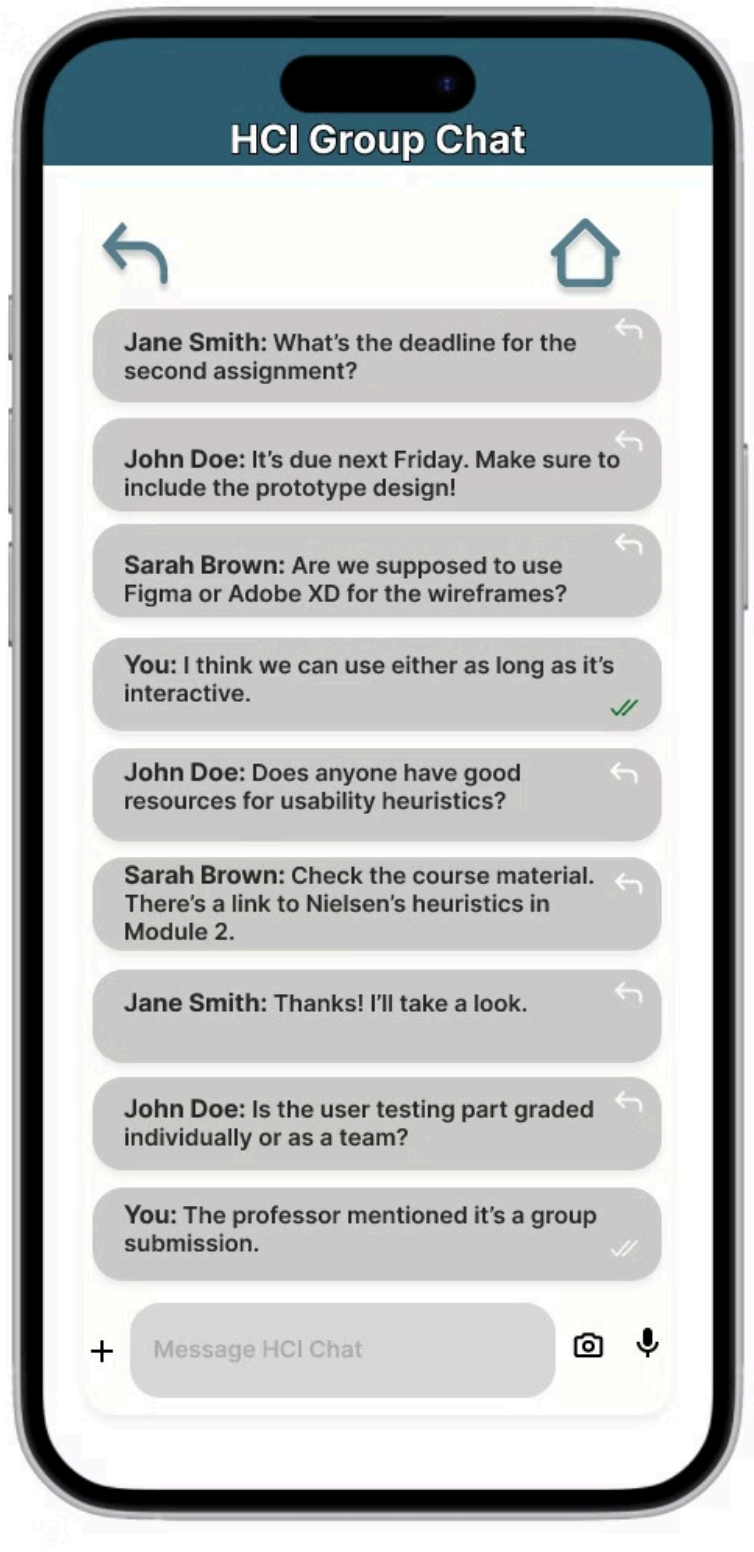
HCI Course Page



HCI Assignments Page



Master Group Chat Page



HCI Group Chat Page