tutti - Assignment 5

on-demand peer-to-peer tutoring

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Meet the Team!

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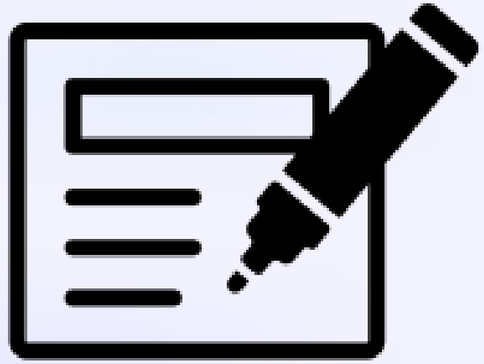


Value Proposition:

On-Demand Tutoring You Can Trust

tutti provides reliable and convenient on-demand tutoring, connecting college students with knowledgeable peers who can offer convenient academic support.

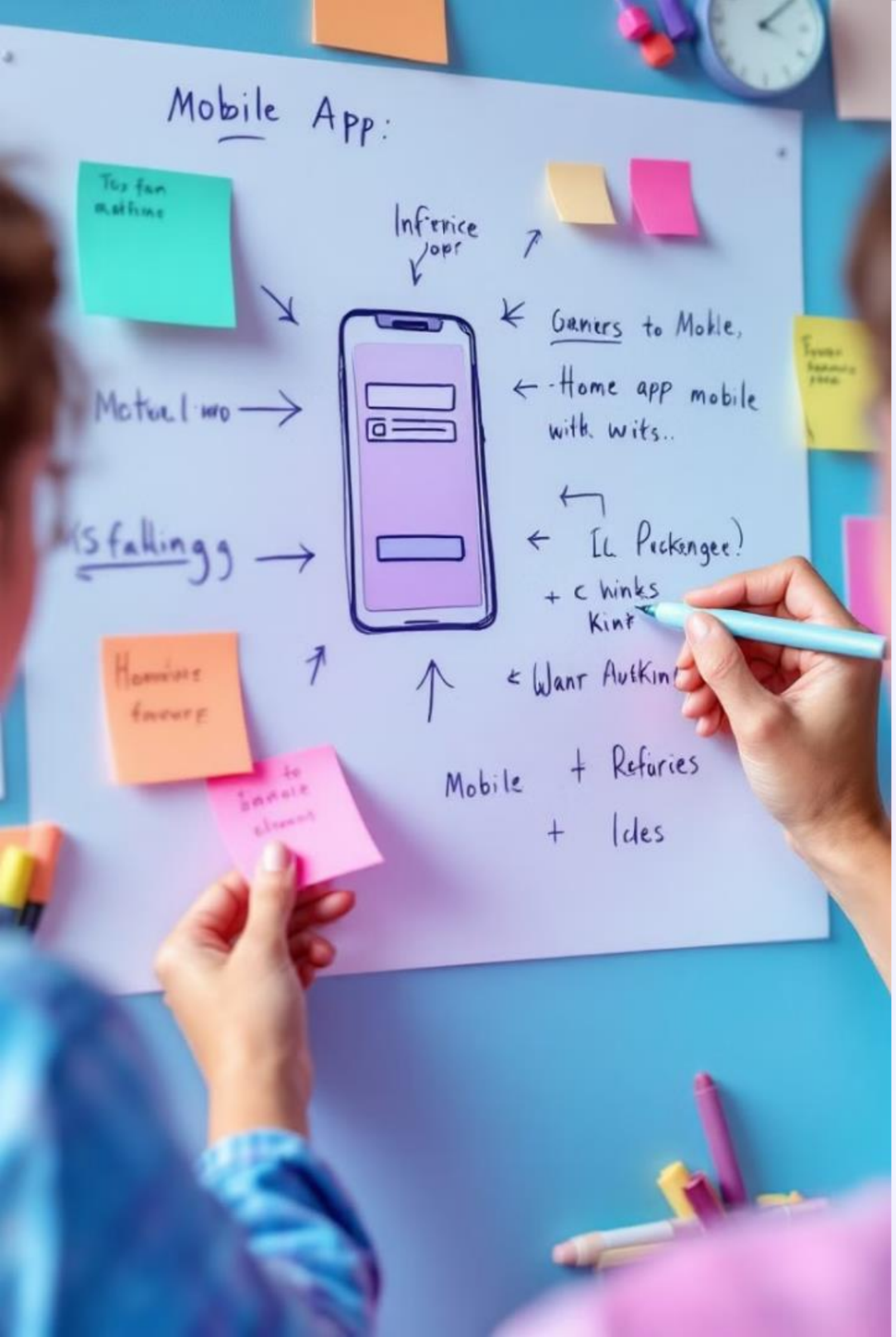
Identifying the Problem and Solution

The Problem:

Students struggle to find reliable peer tutors, leading to inconsistent and inefficient academic support experiences.

Our Solution:

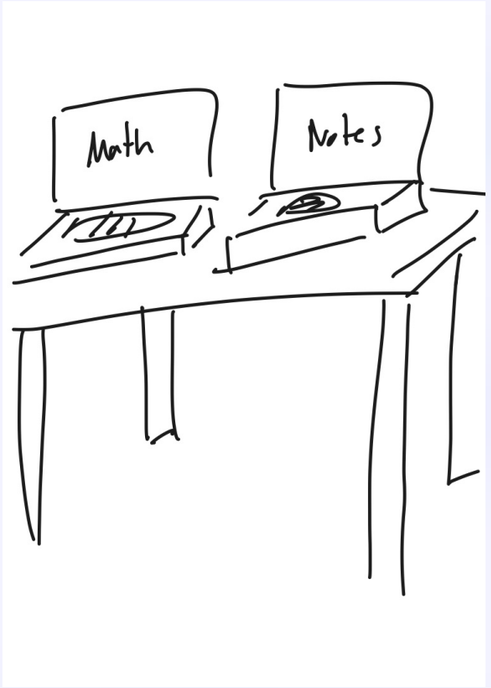
tutti offers a seamless platform connecting students for on-demand tutoring, using ai features to enhance learning



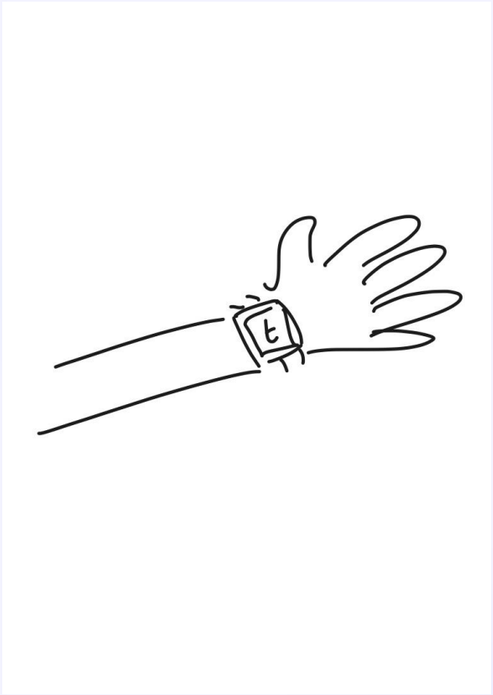
Sketching Exploration

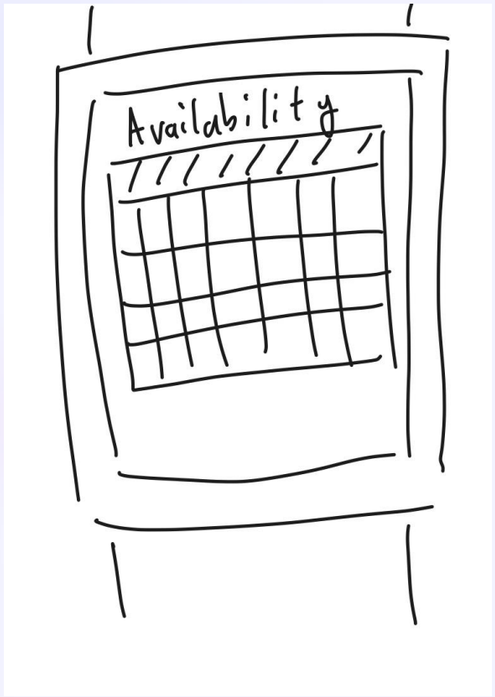
Initial brainstorming involved exploring diverse interface possibilities, analyzing pros and cons of each to determine the most effective solution for tutti.

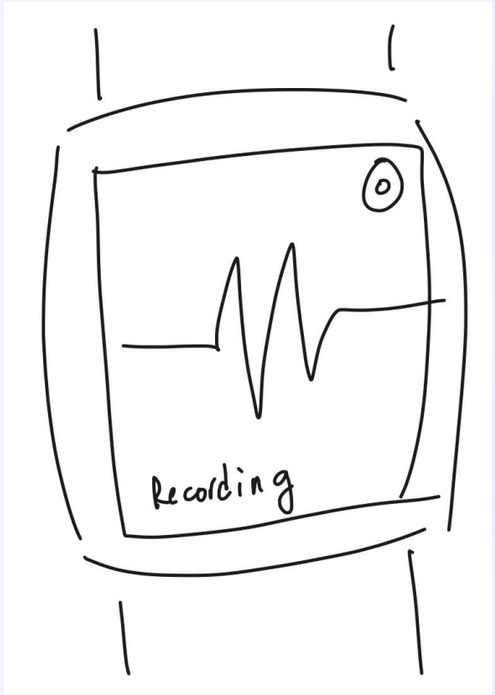
Concept 1: Web Application



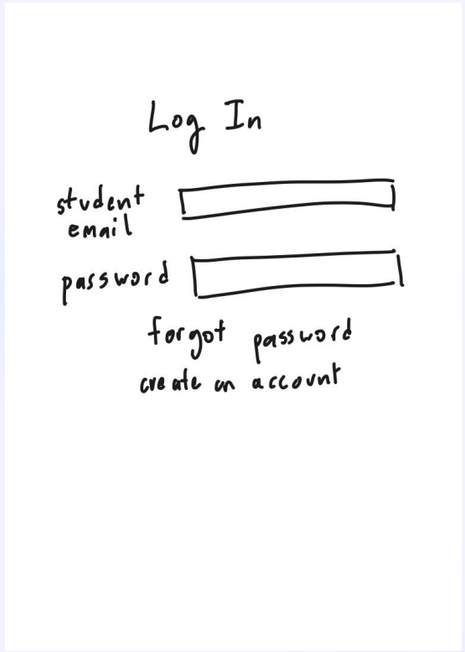
Concept 2: Wearable Application

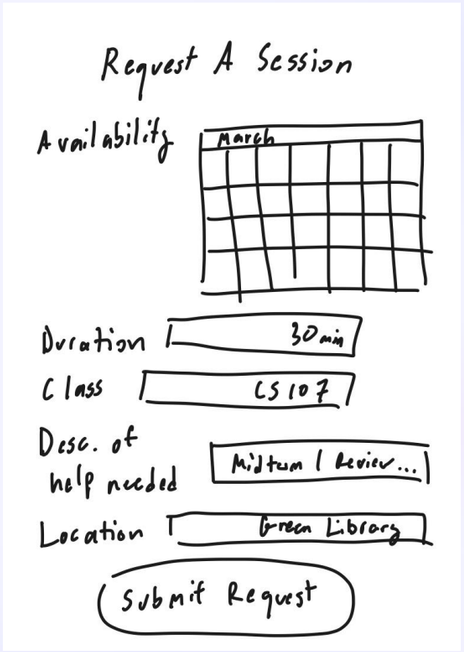


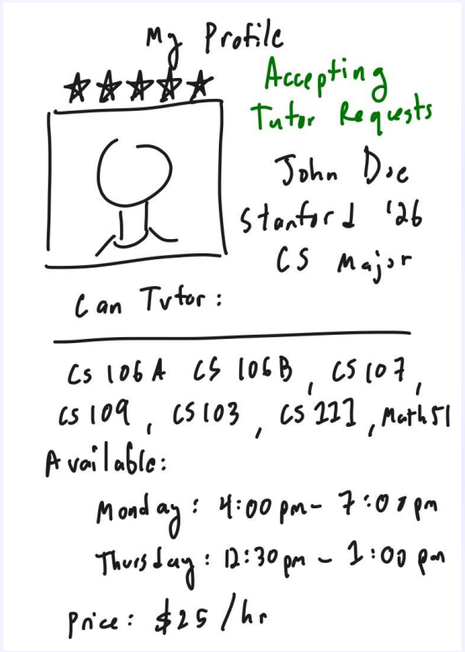


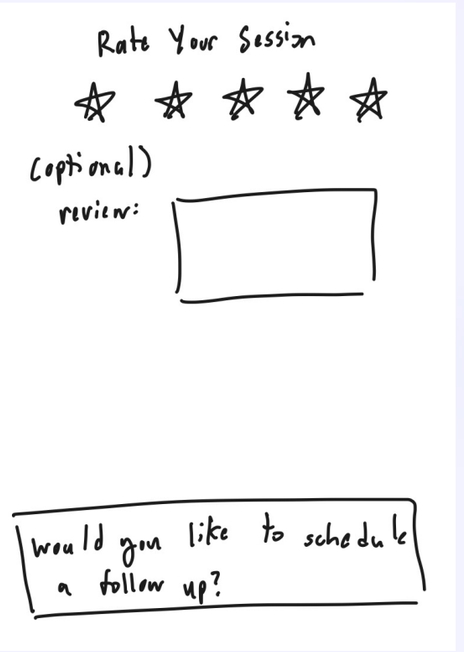


Concept 3: Mobile Application

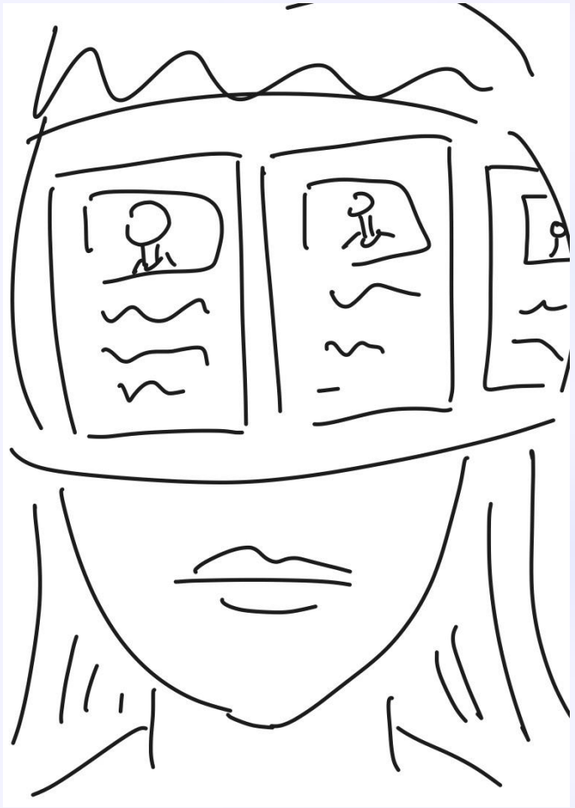


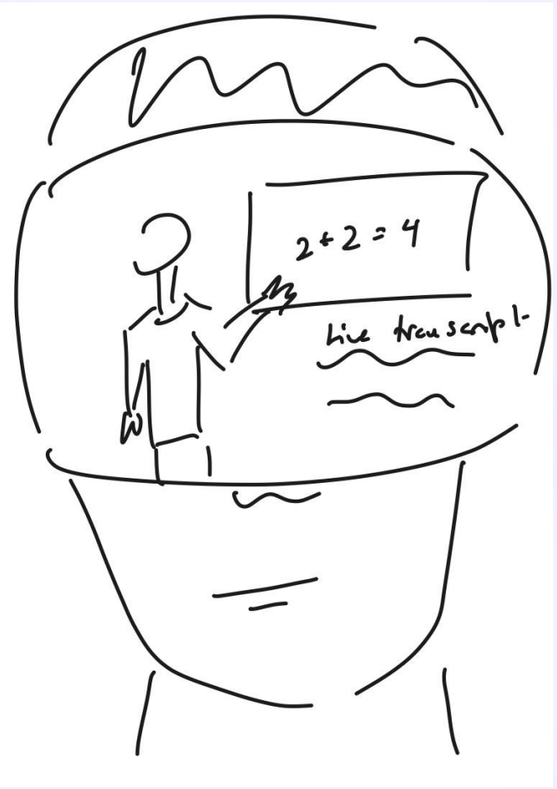






Concept 4: Augmented Reality

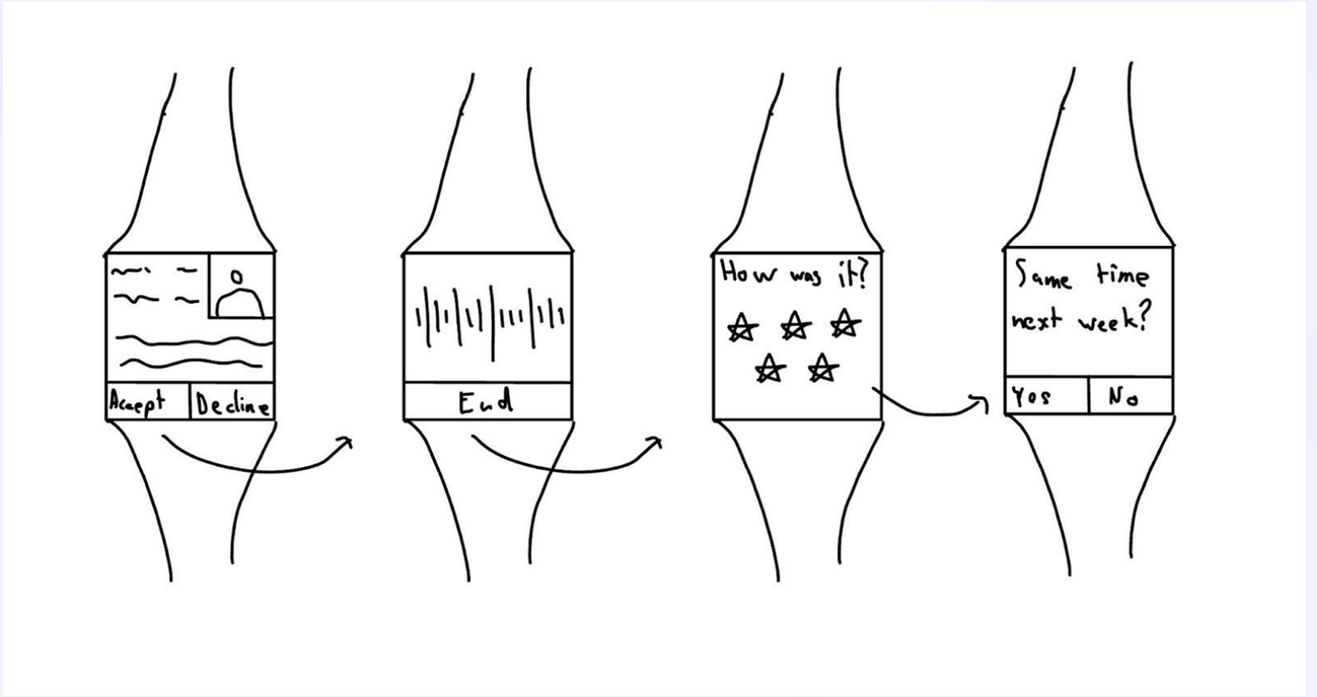


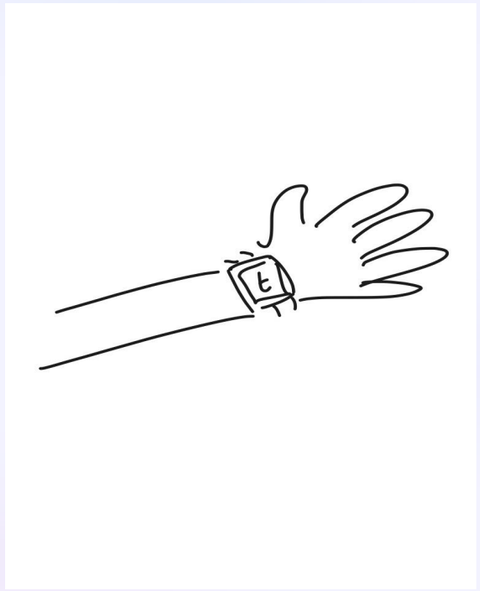


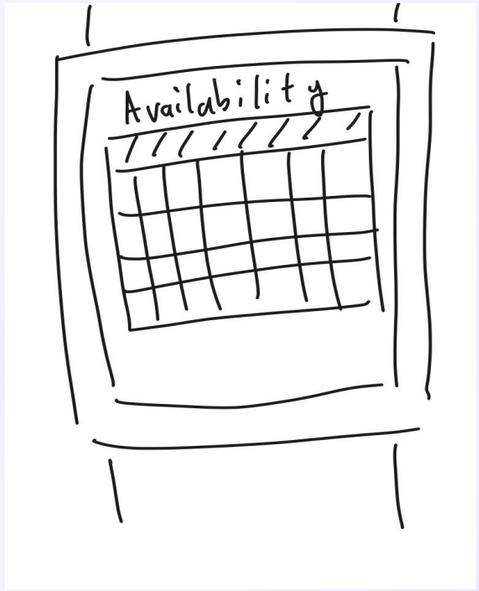
Top 2 Diverse Realizations

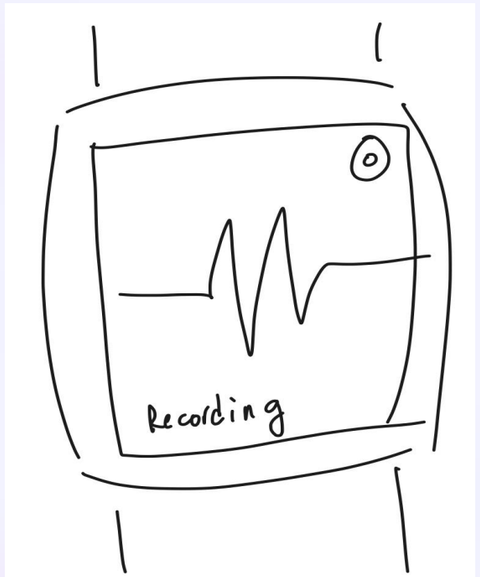
Our sketching exploration led us to focus on two primary interface options: a wearable application designed for smartwatches and a mobile application for smartphones.

Wearable Application









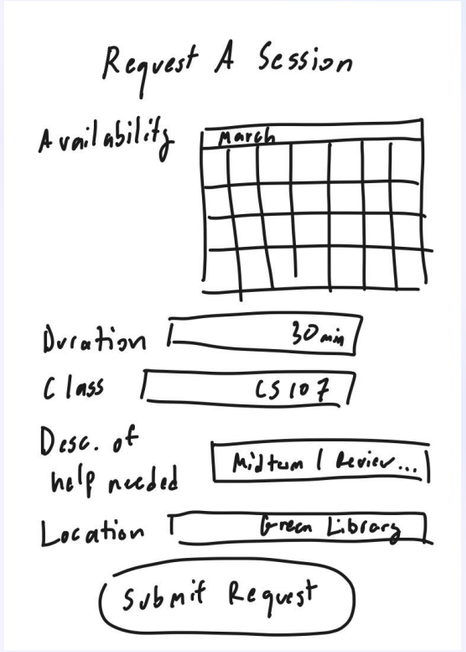
Pros

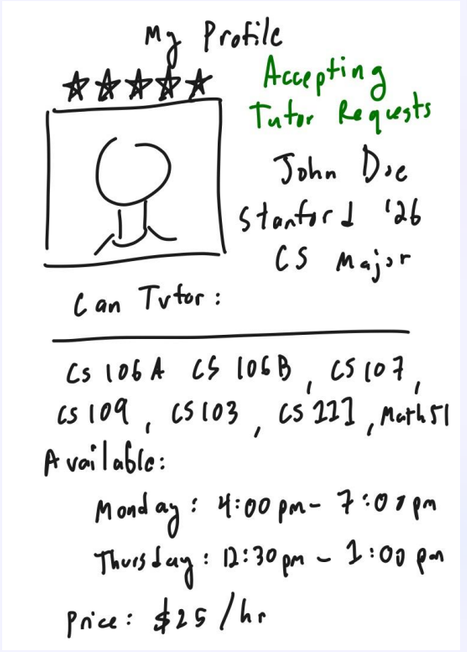
- **Convenient:** Immediate access, especially for notifications.
- **Intuitive and Quick:** Very easy for receiving requests.
- **Easy Notifications:** Simple alerts that users won't miss.

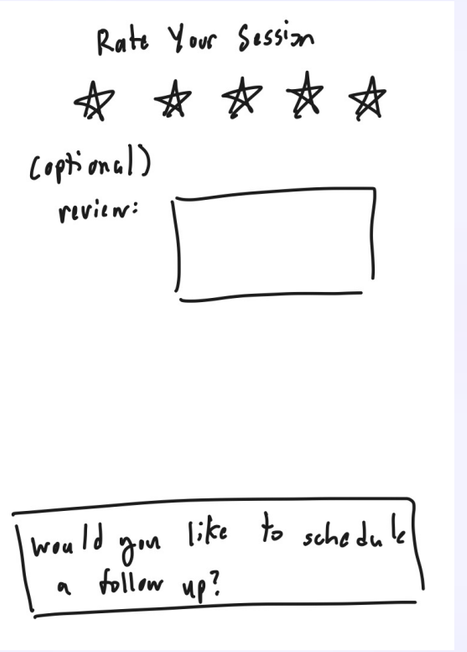
Cons

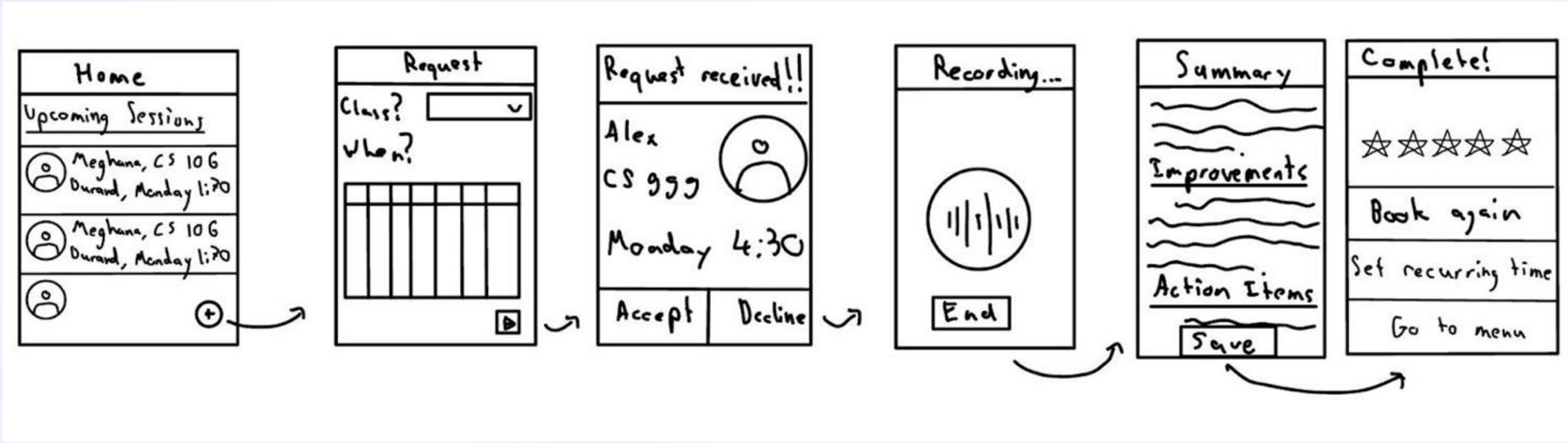
- **Expensive & Low Adoption:** Fewer users own smartwatches compared to mobile phones.
- **Limited Display:** Not enough room for detailed information

Mobile Application









Pros

- **Convenient & Accessible**: Always available in your pocket.
- **Internet Connectivity**: Easy to connect anywhere.
- **Frequent Usage**: Users check their phones frequently, which ensures responsiveness.

Cons

- **Limited Detail**: Screen size limits the information displayed.
- **File Upload Complexity**: More challenging to upload large files compared to desktop.
- **Lower Battery Life**: Frequent app usage can affect battery life.
- **Multiple Operating Systems**: Requires design considerations for iOS and Android.

Selected Interface: Mobile Application

Mobile Application

Convenient & Accessible:

Support available anywhere, anytime.

Frequent Usage:

More likely to see and use tutoring notifications.

Broad Adoption:

The most accessible option.

Wearable Application

Low Adoption:

Few students own smartwatches

Limited Screen Size:

Small screens are not ideal for detailed tutoring content.

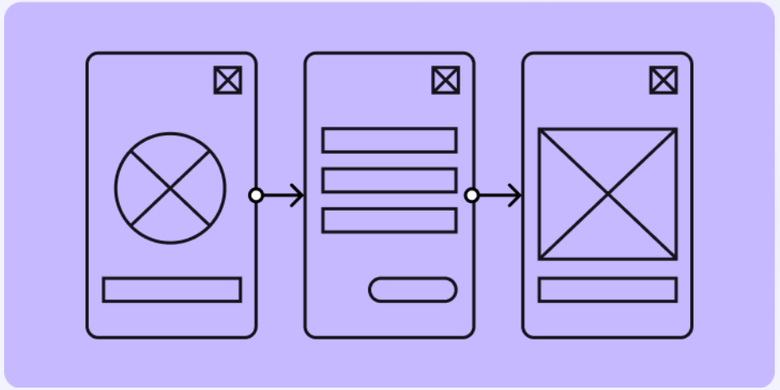
High Cost:

Wearables are expensive, which limits accessibility.

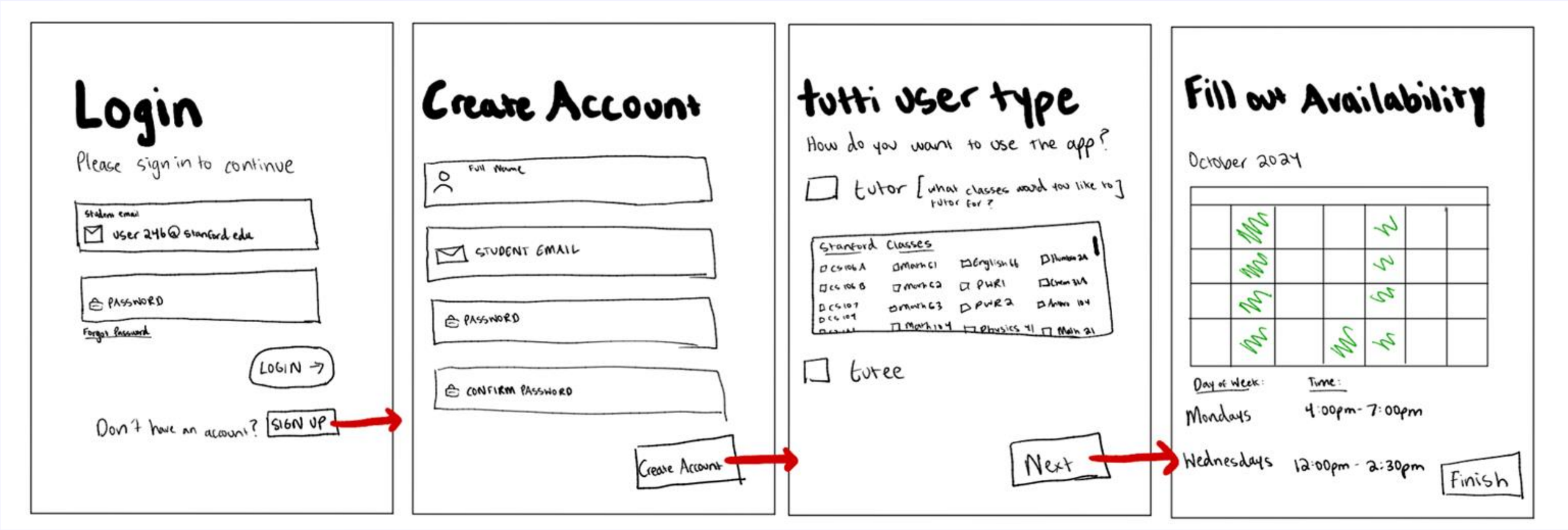
Limited Functionality:

Not suitable for complex interactions

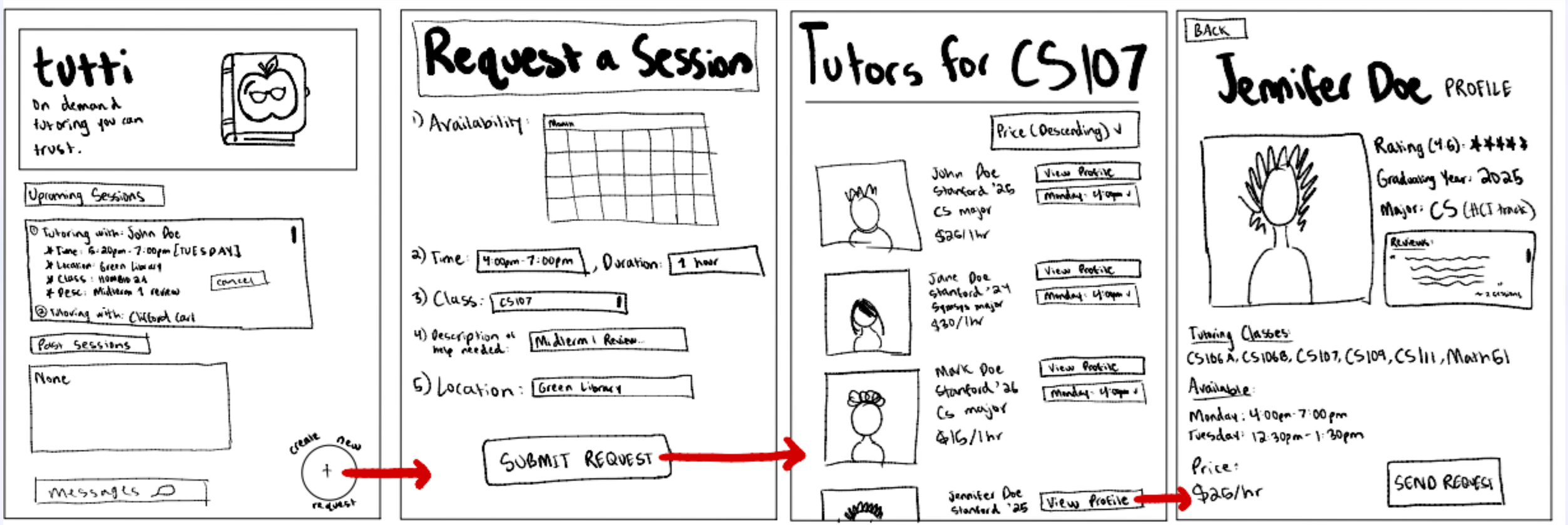
Low-Fidelity Prototype



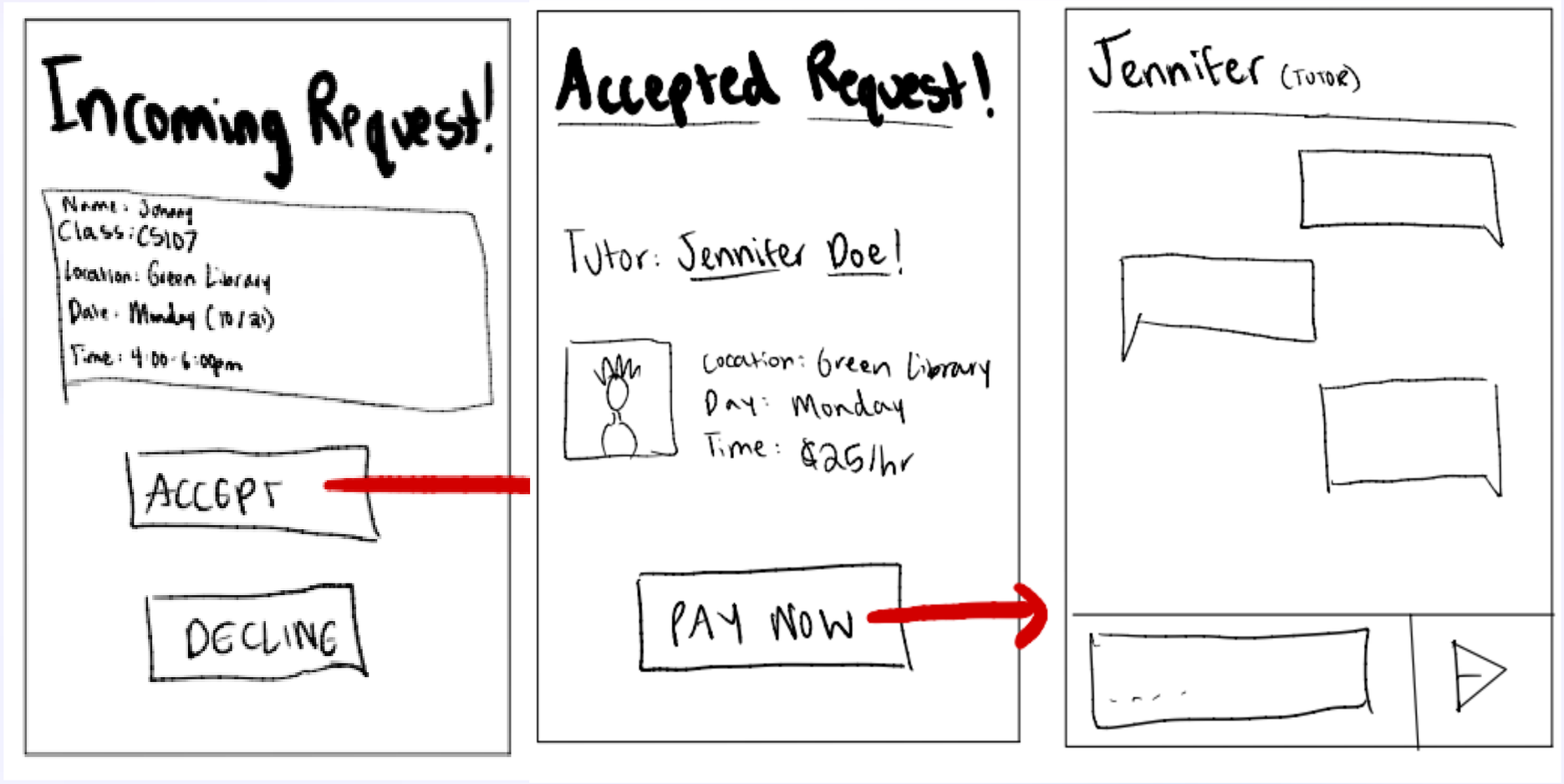
Log in and Create a Profile



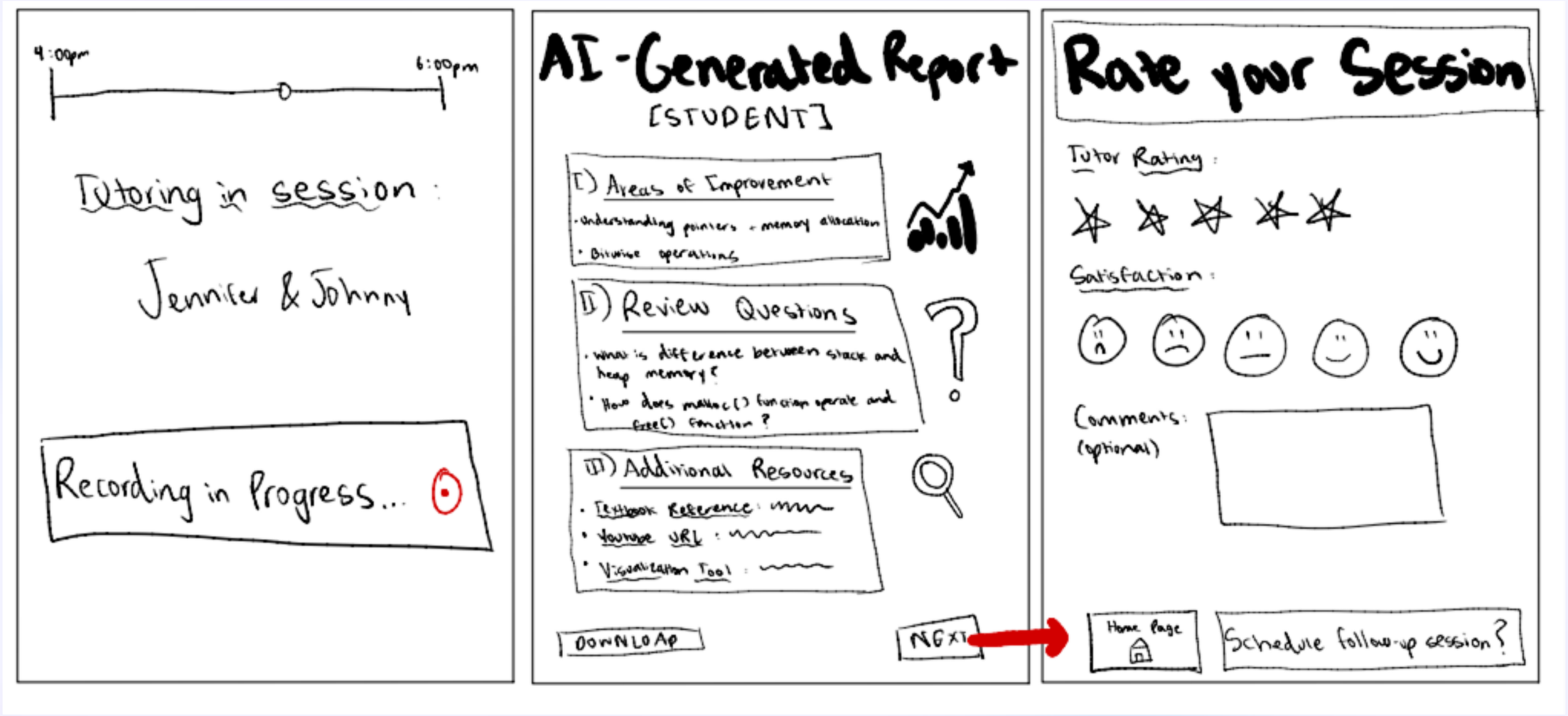
Request a Tutoring Session



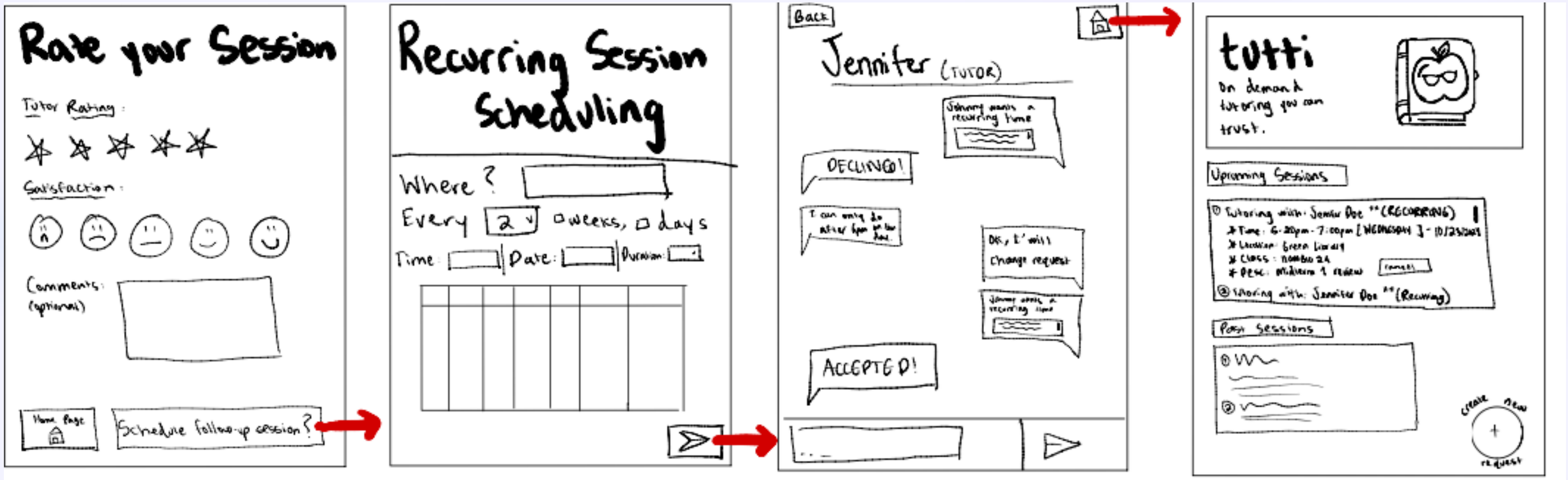
Request a Tutoring Session



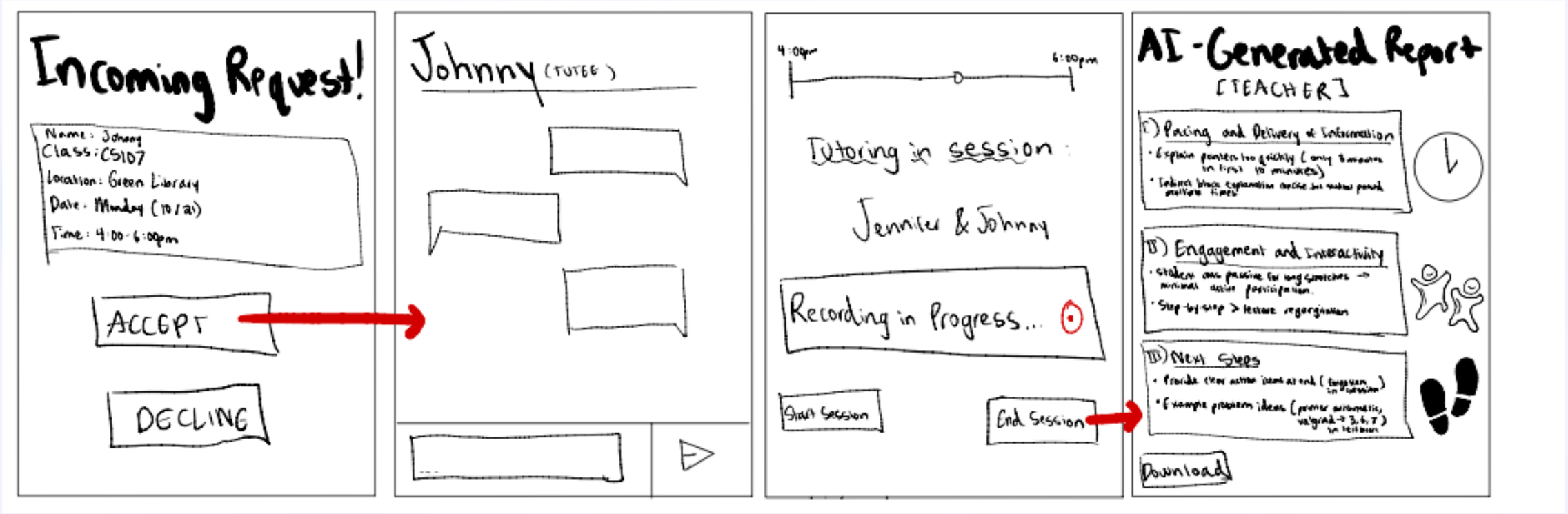
During the Session



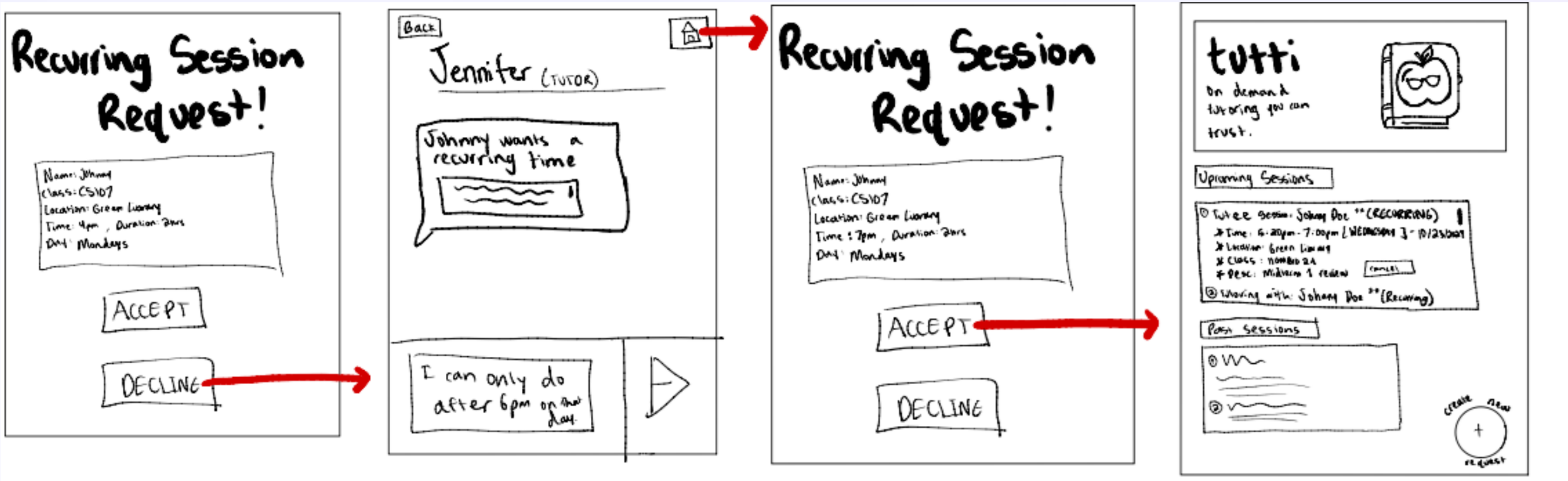
Schedule a Recurring Session



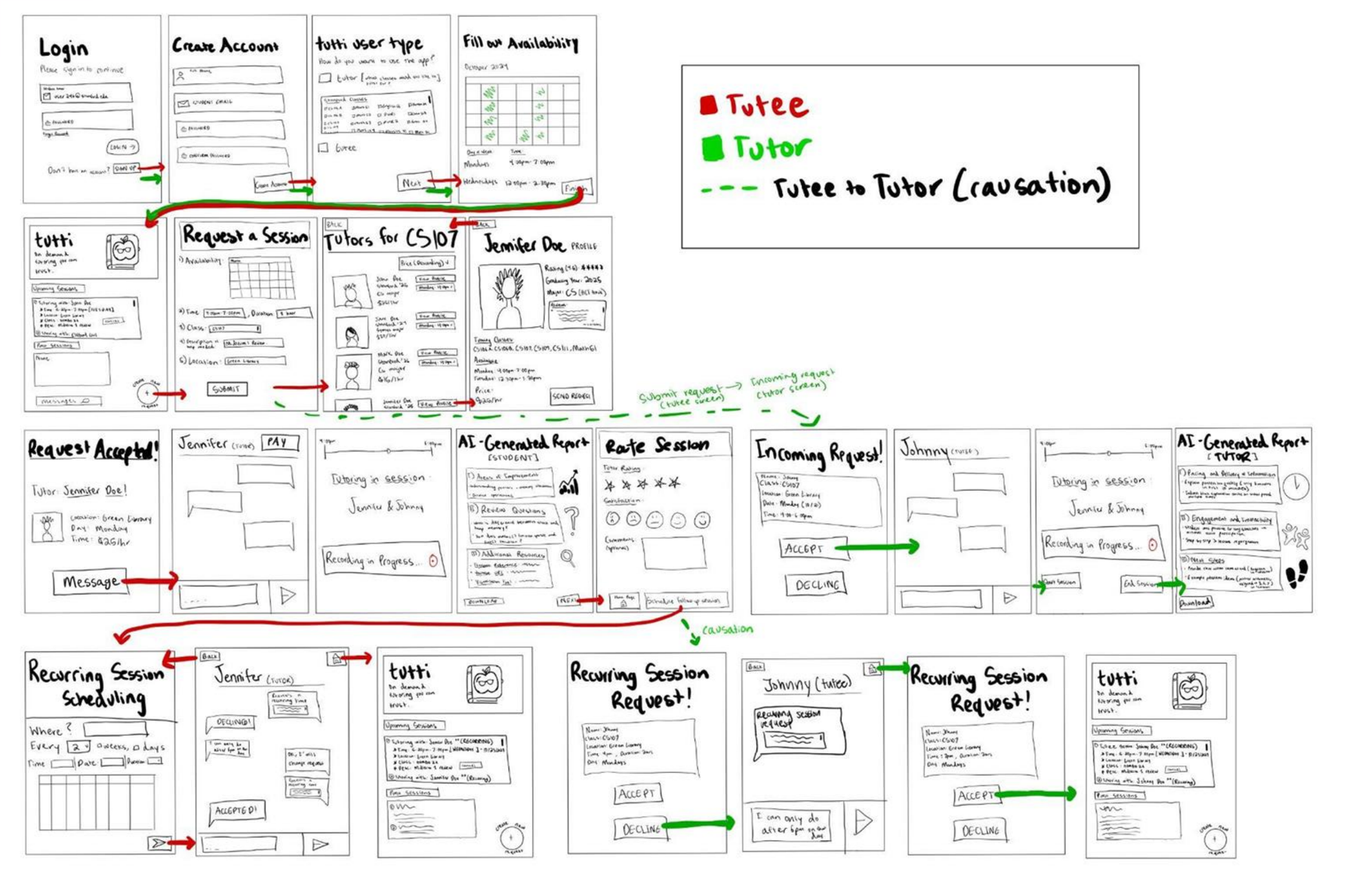
Tutor POV: Receiving Requests



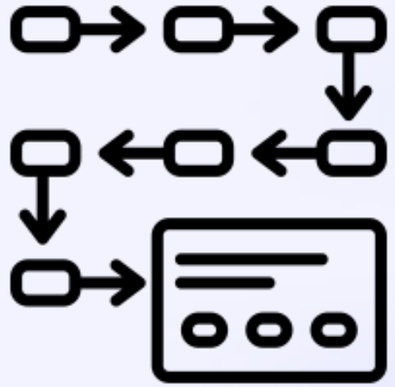
Tutor POV: Receiving Requests



Birds-eye view image of the entire system



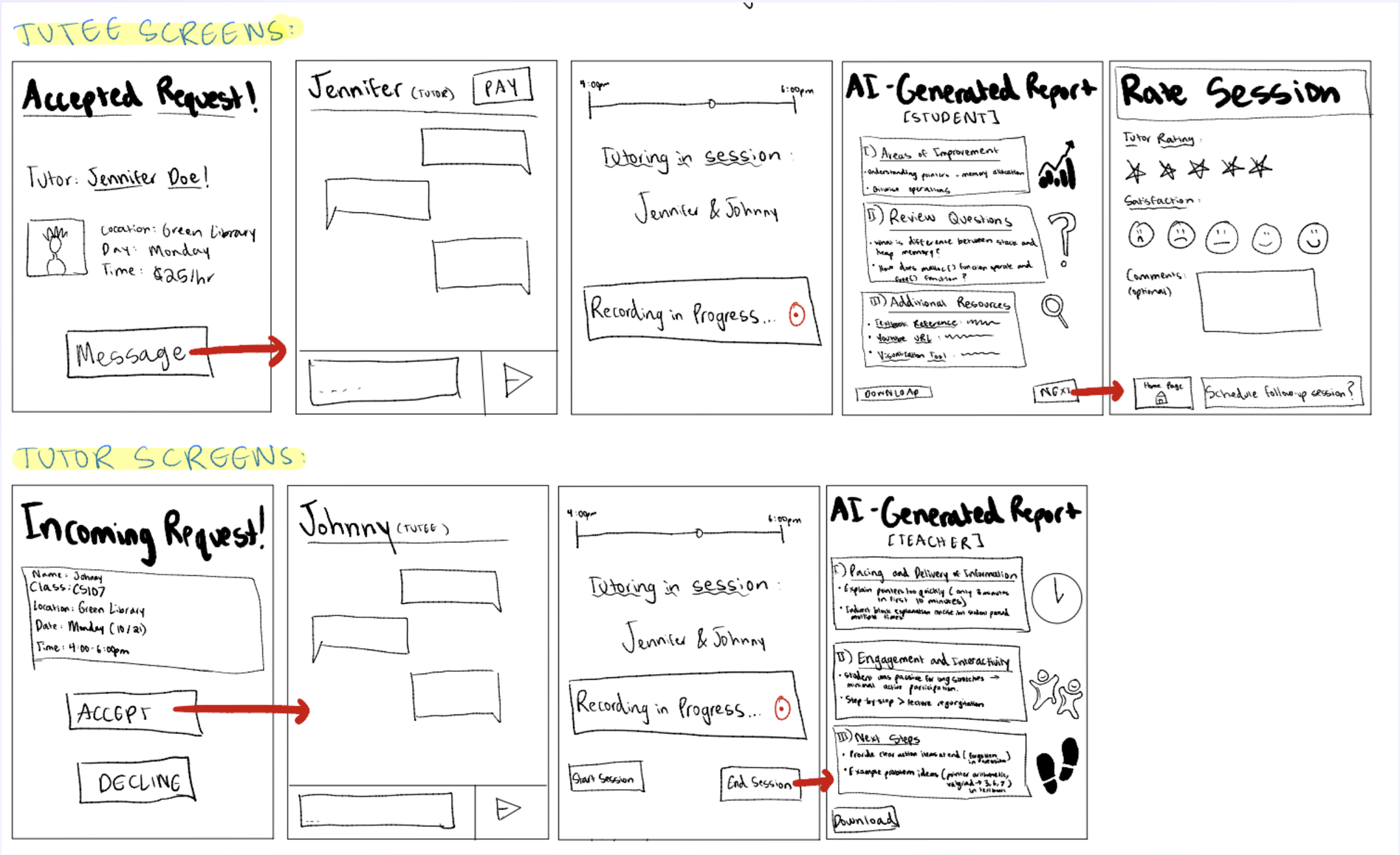
Task Flows



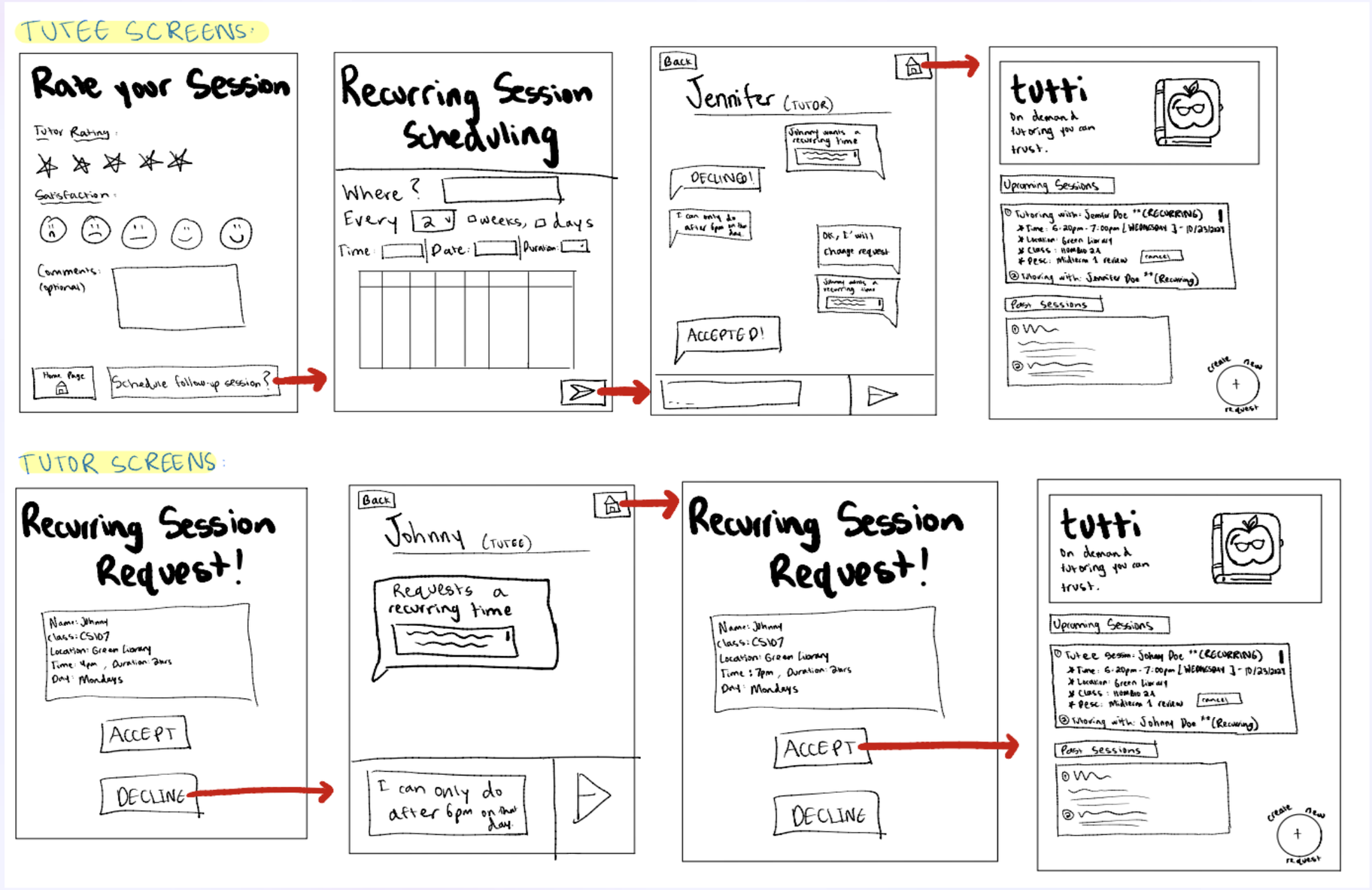
Simple Task: Creating and Setting up Profile

Moderate Task: Request Tutoring Session

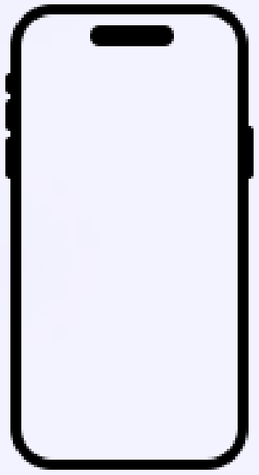
Moderate Task: Complete Tutoring Session and Receive AI-Generated Reports



Complex Task: Process Recurring Session Request



Testing Methodology



Test Participants

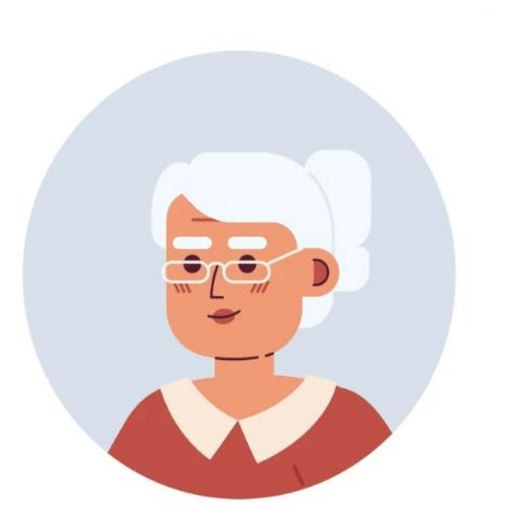
John Yi

Stanford '27

Major: IR

Physics Classmate

Compensation: N/A



Nara Smith

High School Teacher

Cold Email

Compensation: N/A

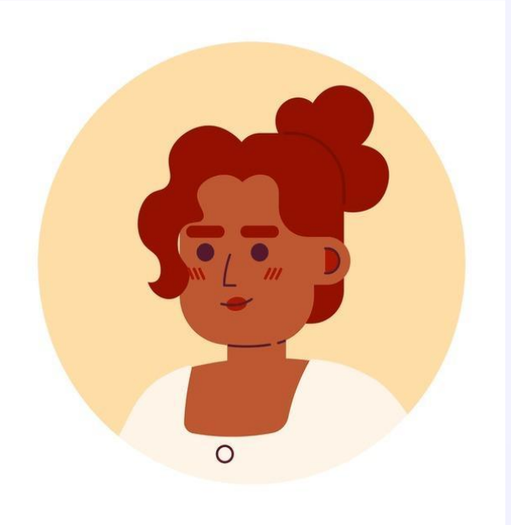
Lucky Blue

Master Student

UCLA (Remote)

Met on Nextdoor

Compensation: N/A



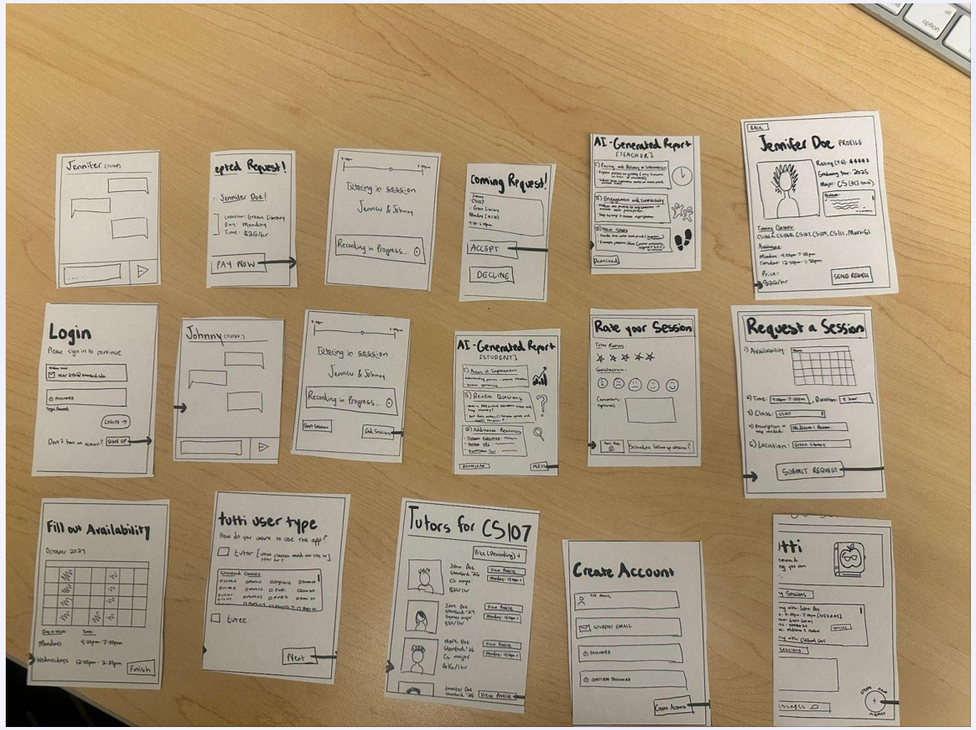
Samantha Jones

Stanford '28

Met through Club

Compensation: Coupa!

Environment and Apparatus



1 Paper Prototype

We used a paper prototype to simulate the app interface.

2 Participant Interaction

Participants interacted with paper screens laid out in front of them.

3 Manual System Response

Team members acted as the system to manually respond to user actions, mimicking the interactions.

Team Member Roles

Facilitator (Alex)

Conducted the session and provided prompts.

Note-takers (Jenn, Jonah)

Two team members observed and noted the participant's actions, behaviors, and comments.

Tutti (Meghana)

Another member acted as the system, changing paper screens according to user interactions.

Description of Procedure

Introduced participants to *tutti* and the paper prototype.

Provided a **hypothetical scenario**: Participants want to find tutoring support quickly and have downloaded the *tutti* app.

Simple Task: Create a profile.

Moderate Task: Request a tutoring session.

Complex Task: Set up a recurring tutoring session.

Play Tutor: Receive a tutoring request.

- Participants shared their thoughts on what was intuitive or confusing.
- After all tasks, participants provided general feedback and suggestions.
- Participants were encouraged to **think aloud** to gauge understanding and intentions.

Usability Goals and Key Measurements

Intuitive Navigation

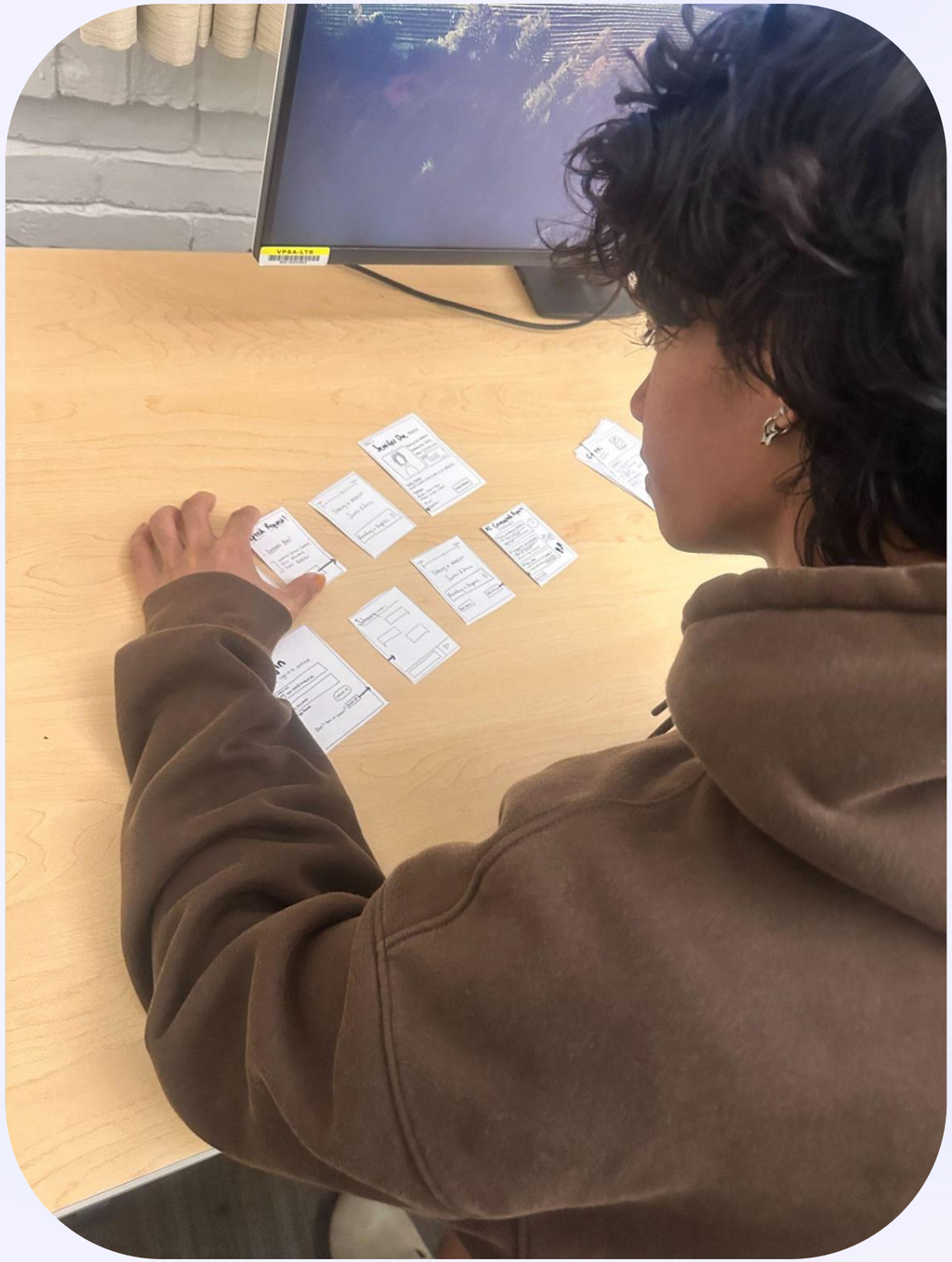
Number of "mis-clicks" made while interacting with the paper prototype.

User Engagement

Participants were asked to rate their likelihood of using different features

Ease of Task Completion

Observed the number of actions and questions participants took to complete each task.



Testing Results: Process Data

General Navigation

Users found the app “generally intuitive” - John

"Recurring Session" setup caused confusion

Profile Creation

Users could easily **create profiles without guidance**

Forgot password was “similar to other apps” - Nara

Session Request

Confusion about **tutor ratings,** leading to mis-clicks

“Does the tutor rate us?” was a frequent question

Usability Goals Achieved: Bottom Line

Intuitive Navigation

Average of **2 mis-clicks per user**, primarily during session requests

User Engagement

Users rated the likelihood of app usage at **7.5/10**

Ease of Task Completion

Session booking took an average of **3 questions, and 6 actions**

Misc. Observations

Recurring Session Complexity

Users found it difficult to locate the **recurring session option,** suggesting a more prominent position

Calendar Integration Request

Integrating a calendar feature on the **home page** for session tracking was a frequent suggestion.

Customization Features

While users appreciated profile customization, they desired more tutor **filtering options.**

How well did we achieve our goals?

Intuitive Navigation

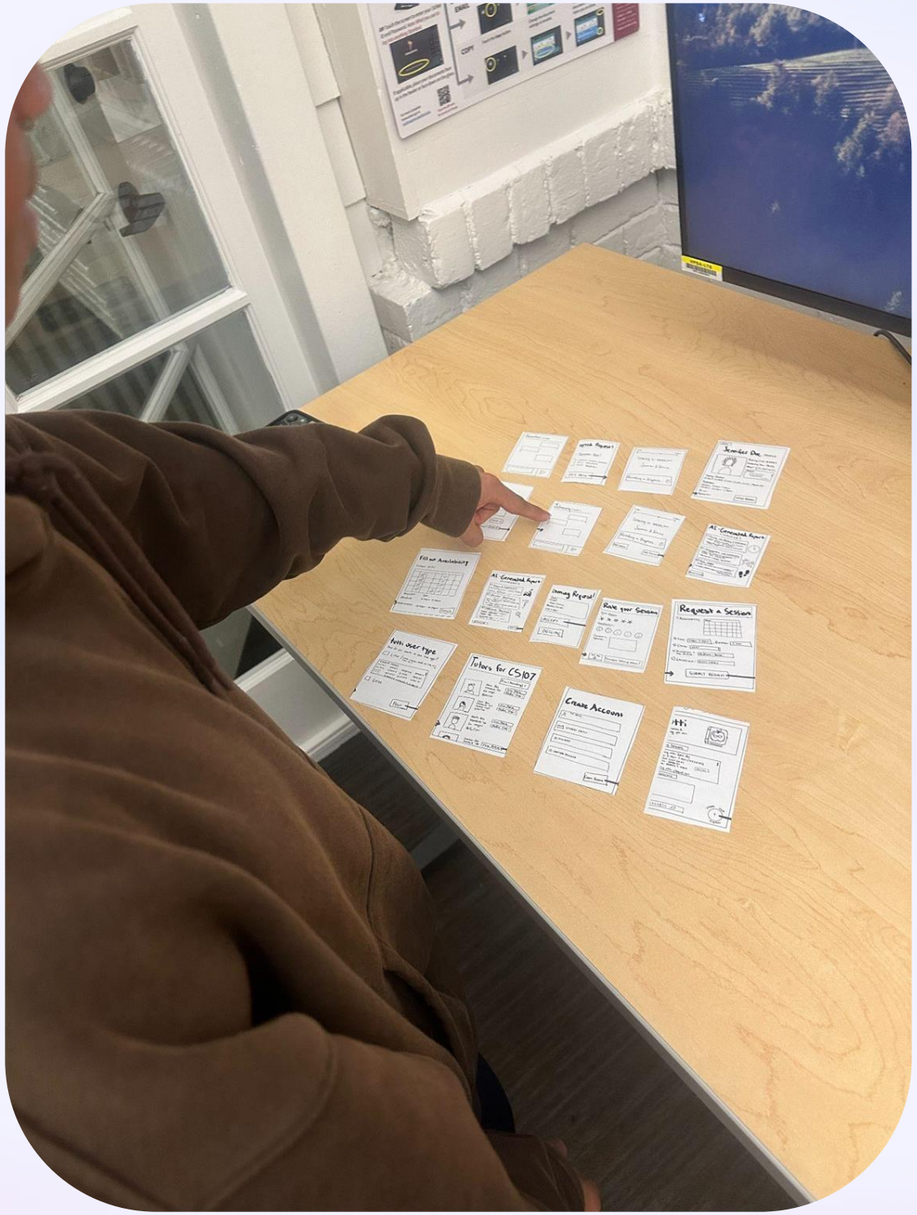
Navigation received positive feedback, with minor concerns regarding **button labeling.**

User Engagement

Participants showed a **strong interest** in using the app, particularly for its **convenience** and **ai features**

Ease of Task Completion

The **average of 3 questions** on average to book a session, we need a more intuitive flow



Implications of Findings

1 Improving Navigation

Clearer button labels, especially for **complex tasks** like recurring sessions

2 Feature Visibility

Prioritizing and increasing the visibility of **key features**, such as recurring sessions

3 User Interest in Customization

Enhanced customization options, including **calendar integration** and **tutor filtering**, can significantly improve user satisfaction.

Design Changes

1

Enhanced Button Labels

Updating button labels will improve clarity and reduce mis-clicks.

2

Prominent Feature Placement

Moving the recurring session feature to the book a session screen will improve its accessibility.

3

Calendar Integration

A calendar integration on the home page will allow users to easily manage session schedules.

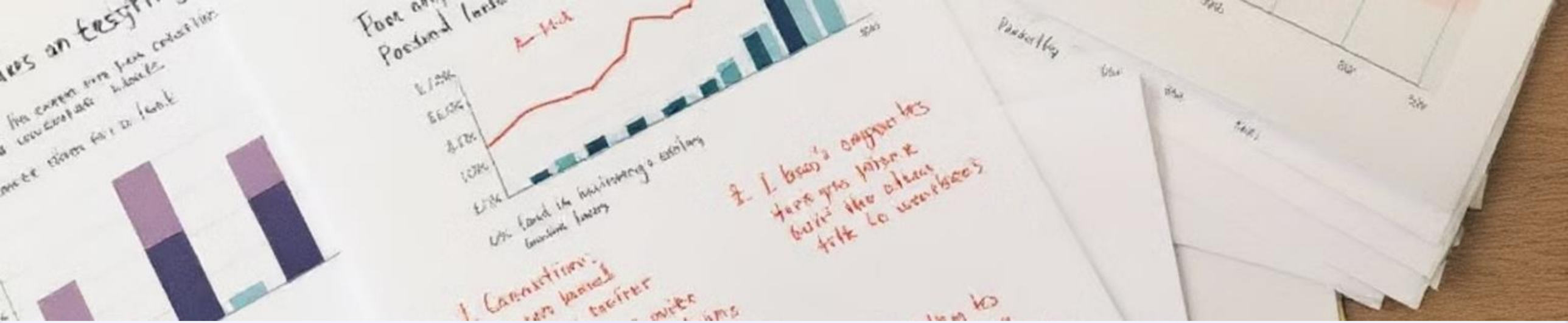
4

More Filter Options

Adding more tutor filtering options, such as availability and specific skills, will enhance the user experience.

Shortcomings/Limitations of Testing

Long-Term Engagement		The **short testing duration** couldn't determine long-term app usage. Longer-term studies are needed.
Group Session Dynamics		Testing focused on **individual sessions**; the effectiveness of group sessions remains unknown.
Scalability		The prototype didn't consider **high user volume**. Further testing is required to evaluate scalability.



Appendix

The following sections contain additional information and details about our testing process, including a full list of pros and cons for our selected interface rationale, critical incidents observed during testing, and the script outline used for conducting the usability tests.

Full list of Pros and Cons for Selected Interface Rationale

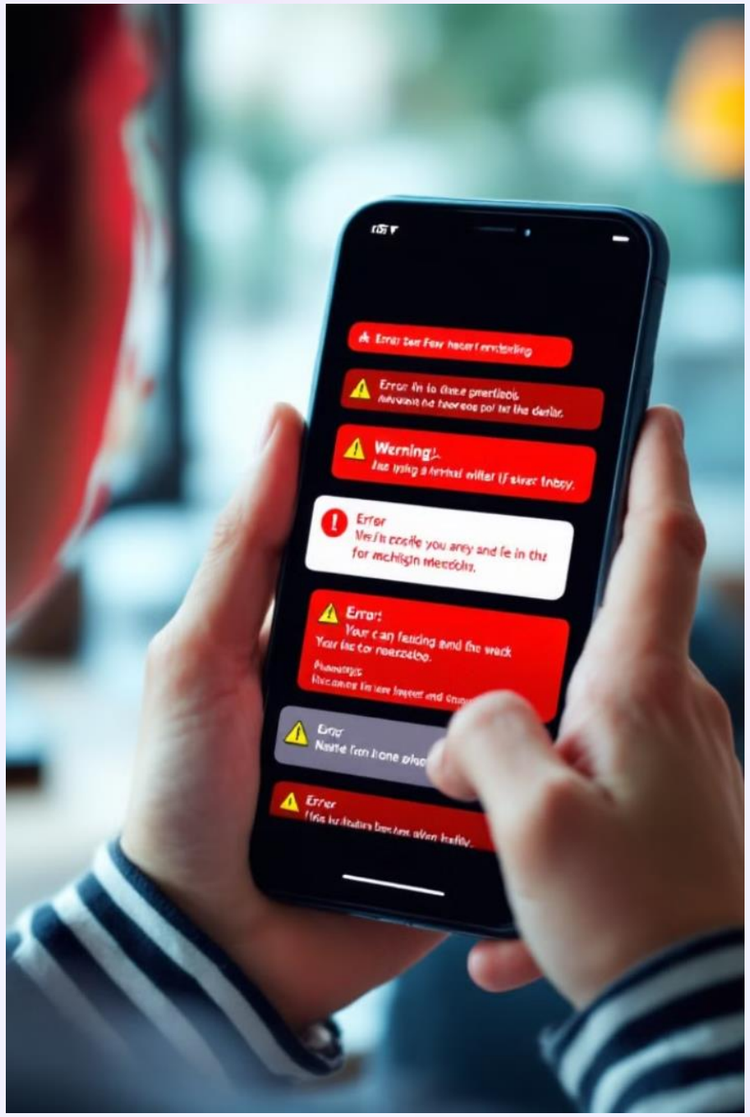
Pros:

- **Convenient & Accessible**:
  Mobile phones are something students always carry, making tutoring support accessible anytime, anywhere. This means students can easily reach out for academic help during breaks, on the go, or even in-between classes, which enhances the likelihood of frequent engagement.
- **Frequent Usage**:
  Smartphones are used multiple times throughout the day, and this habitual usage increases the likelihood that students will see tutoring-related notifications. This frequent exposure encourages users to take action, such as booking sessions, and keeps the tutoring service top of mind.
- **Broad Adoption**:
  Nearly all college students own a smartphone, making a mobile app the most accessible platform compared to wearables or web-only solutions. This universal accessibility ensures that *tutti* can reach its target market without requiring students to purchase new technology or adapt to unfamiliar devices.
- **Internet Connectivity**:
  The mobile app can leverage mobile data and Wi-Fi, ensuring that students can connect with a tutor anywhere—whether on campus or at home. This connectivity also allows seamless updates, such as real-time notifications, ensuring users are always in the loop regarding session reminders or changes.
- **User-Familiarity**:
  Most students are already comfortable navigating mobile applications, which reduces the learning curve. This familiarity means students can start using the app with little to no instruction, leading to better initial engagement and lower dropout rates during onboarding.

Cons:

- **Screen Size Limitations**:
  The smaller screen size on mobile devices limits how much information can be displayed at one time. This is particularly challenging for showing detailed tutor profiles, in-depth session notes, or analytics about a student's progress. It requires careful design to avoid overwhelming the user while still providing all necessary information.
- **Battery Consumption**:
  Frequent app usage may lead to increased battery consumption, which can deter users, especially those with limited charging access throughout the day. Battery-intensive features, such as live video tutoring or location tracking, could further exacerbate this issue.
- **File Upload Complexity**:
  Handling larger files, like assignments or detailed study materials, can be more challenging on mobile compared to desktop. Uploading documents might be cumbersome due to slower mobile processing speeds, network limitations, or the general inconvenience of navigating file structures on a smaller screen.
- **Distractions and Competing Apps**:
  Mobile devices are filled with distractions such as social media, games, and other notifications. When students are using *tutti*, they are prone to interruptions, which could impact the effectiveness of tutoring sessions or disrupt the booking flow.
- **Multiple Operating Systems**:
  Developing for both iOS and Android presents unique challenges. Each operating system has different design guidelines, functionalities, and restrictions. Ensuring a consistent user experience across these platforms requires additional resources in development and testing, and discrepancies could impact the user experience for one group of users.
- **Privacy Concerns**:
  Mobile apps often request permissions (e.g., location, camera, storage) that can raise privacy concerns among users. Addressing these concerns through transparent data practices and securing sensitive information is essential to build trust with the user base.

Critical Incidents



Incident	Severity	Details
Difficulty in differentiating user type	2	Participants were confused when selecting their role between 'Tutor' and 'Tutee' during account setup.
Mis-clicking on tutor profiles	2	Users weren't sure which button would provide more information about a tutor, leading to multiple mis-clicks.
Confusion when filling out availability	3	Participants thought they had saved their availability, but the data was missing when they moved forward.
Unclear meaning of AI-generated report	2	Several participants were unclear about what the "AI-generated report" meant and whether it was related to tutor feedback.
Recurring session setup was hard to find	3	The recurring session setup option was not intuitive to find, being buried under multiple menu layers.
No clear confirmation after account creation	1	Participants reported not receiving an explicit confirmation screen after creating their account.
Confusing feedback when session request declined	2	Decline messages were unclear, leading users to question whether the issue was with their schedule or the tutor's availability.
Struggled to edit tutor profile after setting availability	2	Difficulty was reported when attempting to edit tutor profiles after setting initial availability, requiring multiple steps.

Critical Incidents

Accidentally canceled a recurring session	3	Participants who intended to cancel one session inadvertently ended all future recurring sessions. There was no clear distinction between single and all cancellations.
Missed notification about incoming request	2	Users missed notifications about incoming tutoring requests until they reopened the app, indicating poor notification visibility.
Difficulty using 'Rate Session' option	1	The 'Rate Session' option was buried at the end of the workflow, resulting in participants almost missing it for providing feedback.
Mis-click when assigning availability	2	Some participants mistakenly selected the wrong day for availability, and there was no visible undo function.
Difficulty understanding 'AT-generated report' feature	2	The 'AT-generated report' feature was confusing, with participants unsure whether it pertained to session reports or some other form of analytics.
Limited guidance on 'Create Account' process	1	Creating an account lacked clarity—participants didn't know which fields were mandatory.
Confusion over 'Recurring Progress' metric	3	Participants didn't understand the 'Recurring Progress' metric during recurring session setup—was it tracking overall progress or individual sessions?
Tutee didn't get notified when session request was modified	2	When a tutor modified session times, participants did not receive a notification, which led to confusion about changes.
Miss-clicked on 'Message' instead of 'Request Session'	1	Some participants accidentally clicked 'Message' when they intended to 'Request Session'.
Missed seeing tutor reviews during session request	1	Participants struggled to locate tutor reviews while booking sessions. They expected these to be more visible.
Unclear recurring request acceptance flow	3	Participants found the recurring request acceptance confusing—uncertain if it covered all upcoming sessions or just one.
Missing causation link (tutee to tutor feedback loop)	2	The tutee-to-tutor feedback loop wasn't clearly explained, leaving users uncertain about the purpose of immediate reviews.
No prompt for changing user type (tutor to tutee)	2	Switching from 'Tutor' to 'Tutee' after initial signup was not intuitive, leading to frustration.
Tutor confirmation too delayed	3	Participants felt the delay between submitting availability and getting tutor confirmations was too long.
Cumbersome 'Fill Availability' interface	2	Selecting time blocks on the availability screen was finicky, with many users experiencing issues saving selections.
Incomplete recurring request information	2	The recurring session setup lacked details—users couldn't tell if it was set up for weekly or bi-weekly meetings.
Confusion over tutee to tutor communication (causation)	1	Users did not understand the dashed line linking 'tutee to tutor'—they were unsure if it implied feedback or another function.

Script Outline

1

Introduction

"Hi, thank you for joining us today. We're going to test a low-fidelity version of our tutoring app, tutti. The goal is to see how easily you can use the app to complete common tasks, such as finding a tutor or managing a session. Feel free to ask questions as we go along."

2

Scenario Setup

"Imagine that you're a college student looking for some extra academic help. You've just downloaded tutti to quickly find tutors for your coursework. Let's see how you get started!"

3

Tasks

1. Profile Creation
2. Request a Tutoring Session
3. Recurring Session Setup

4

Post-Task Reflection

"Great! Now that we're done, could you tell me which features felt clear and intuitive, and which features you found confusing or hard to use? How likely are you to use this app in your daily routine?"

5

Closing

"Thanks again for your time and feedback today. We really appreciate your insights as they will help us make tutti better for students like you."