
Introducing:

Locked



*Effortless, personalized study groups tailored to your
schedule, preferences, and learning styles*

How does Locked work?

We collect information from students in classes and use AI enhanced tools paired with research on effective collaboration practices to automatically plan recurring study sessions and manage group projects



Meet The Team!

'25



**Ecem
Yilmazhaliloglu**

BS CS
Istanbul, Turkey

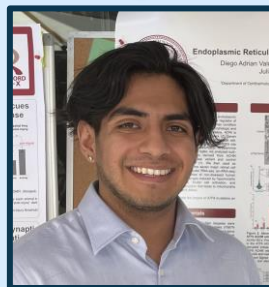
Alexander Yue

BS Physics
Sacramento, CA



'27

'25



**Diego Valdez
Duran**

Coterm CS
Aspen, CO

Evan Hsu

Coterm
Rancho Cucamonga, CA



'25



A5: Lo-Fi Prototype

Team 2: Locked 

- Alexander Yue
- Evan Hsu
- Diego Valdez Duran
- Ecem "AJ" Yilmazhaliloglu

TABLE OF CONTENTS

01

Intro

02

Mood Board

03

Sketching

04

Lo-Fi Prototype

05

User Testing

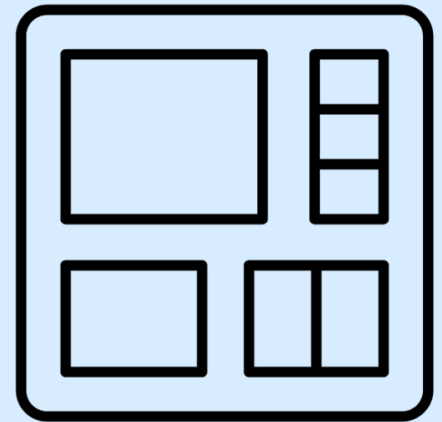
06

Discussion



02

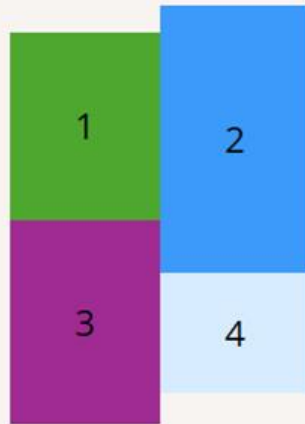
MOOD BOARD



Locked

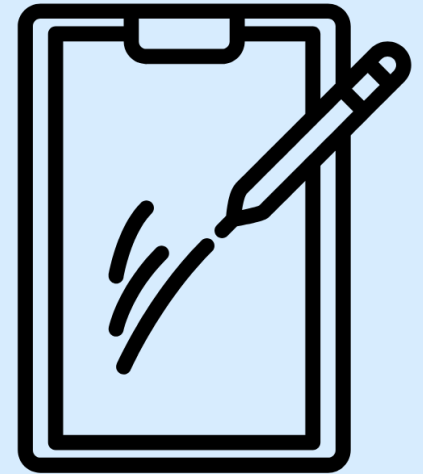


Open Sans
Locked In
Study
Focus up
Commit
Just do it

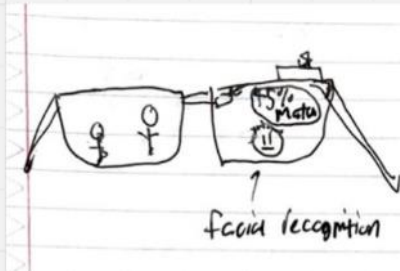


03

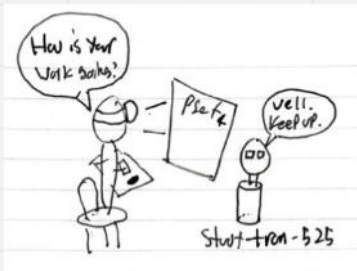
SKETCHING REPORT



CONCEPT SKETCHES



View through Smart Glasses



VR Assistant with PSET Checker Tool



Zoom Assistant in a Study Session



Owl Camera Bot in a Study Session

Figure 1. These are VR/AR realizations grouped into different scenes with assistants.

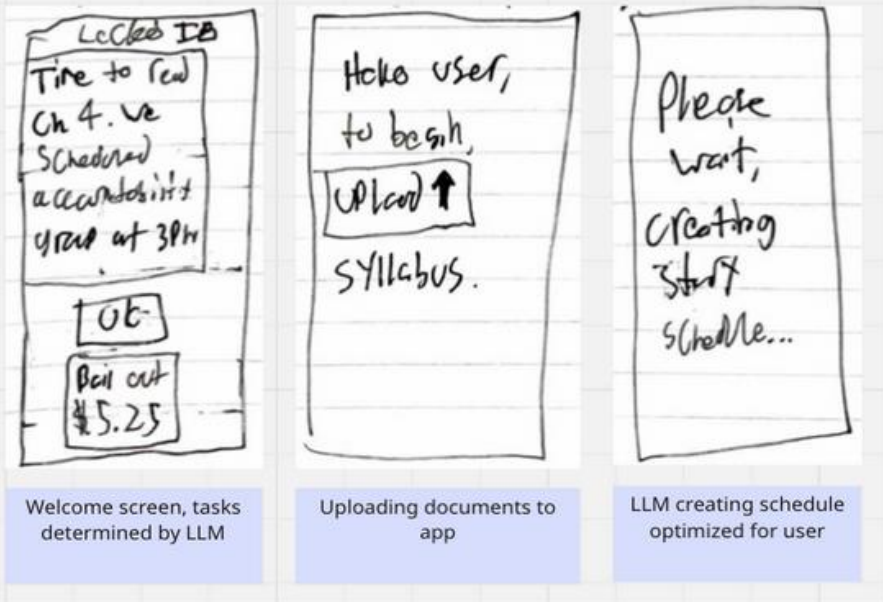


Figure 3. This is an LLM text-only app realization on a mobile phone.

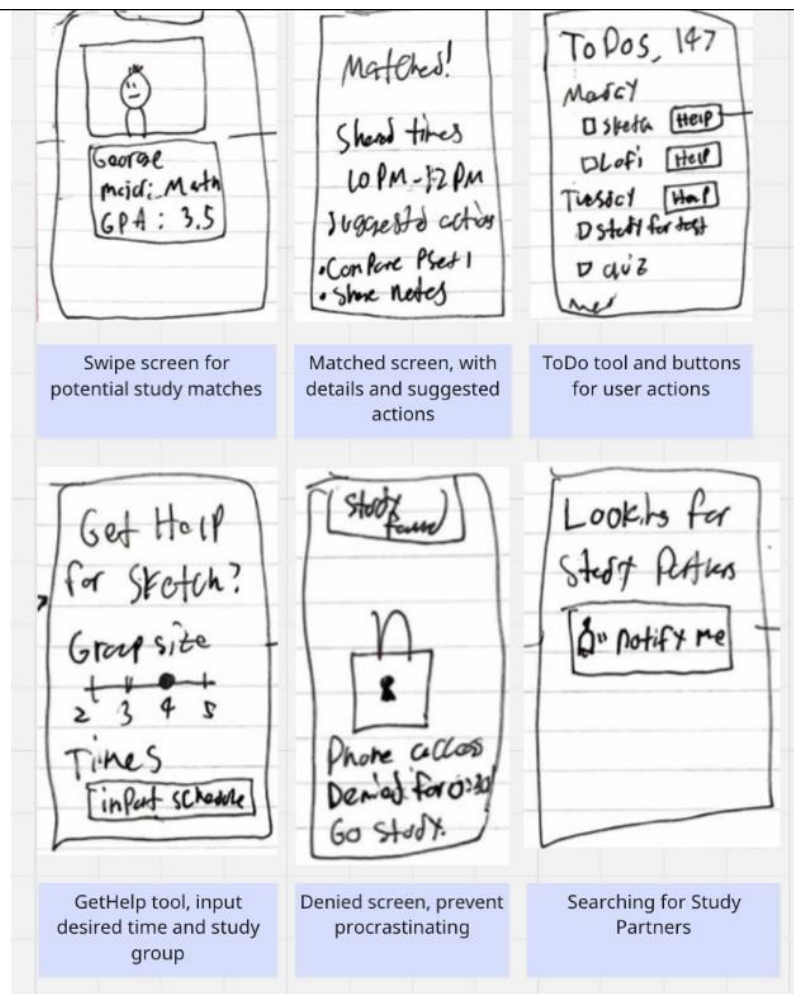


Figure 2. This is a native mobile app realization with swipes, matching, and tool views.

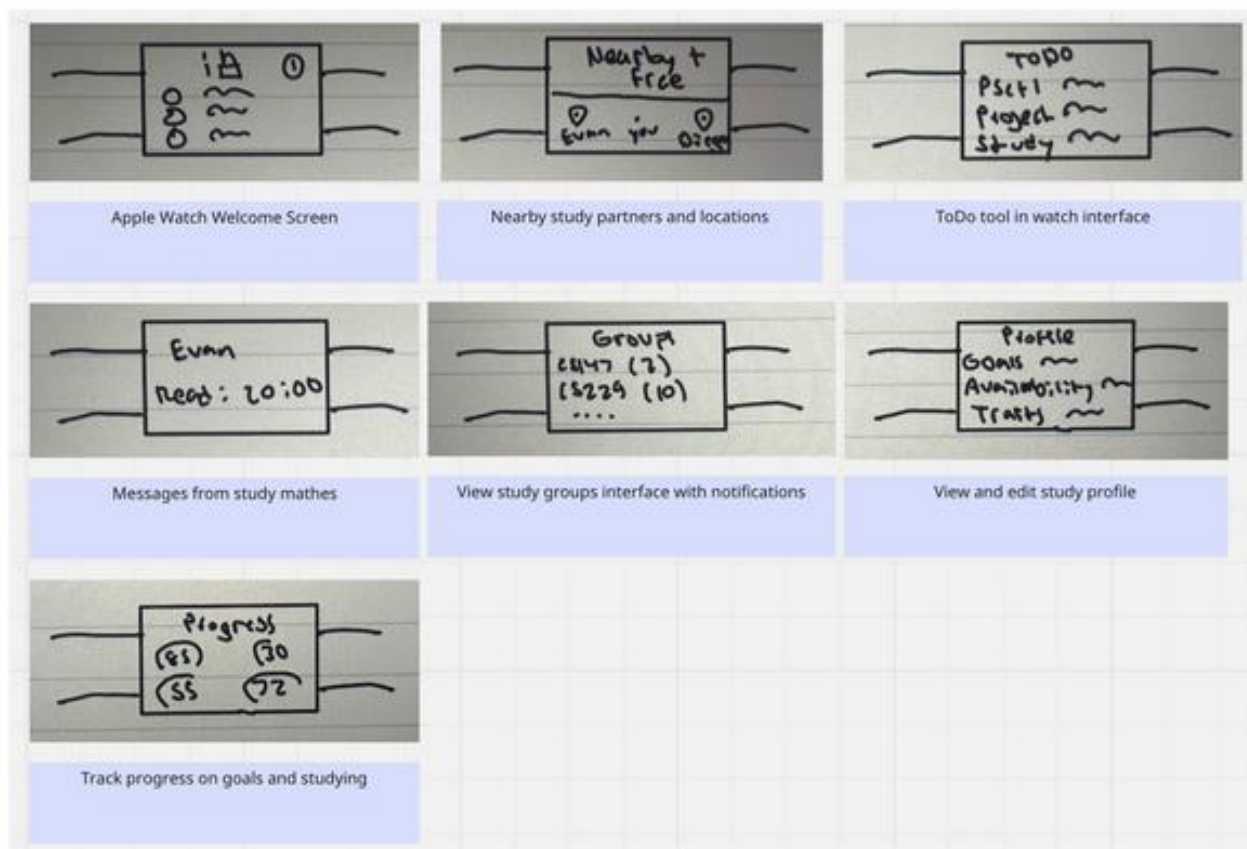


Figure 4. This is an Apple Watch realization with small icons, pages, and tools.

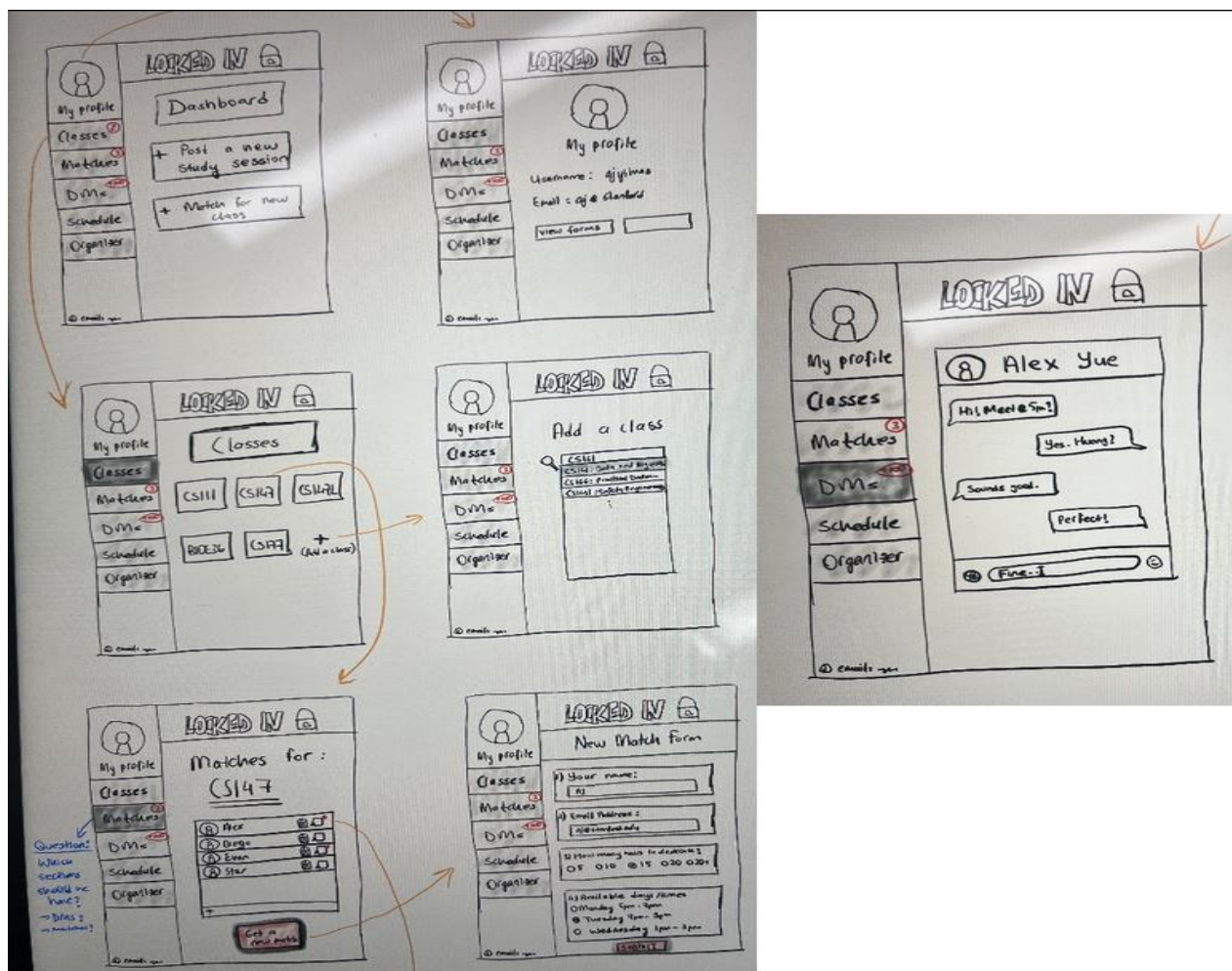


Figure 5. This is a more developed native app interface with a dashboard, messaging, and other group management tools.

WEARABLE INTERFACE (APPLE WATCH)

Pros	Cons
<ul style="list-style-type: none">• Easily accessible on-the-go, making it perfect for quick check-ins and updates• Ideal for simple tasks, quick notifications, or reminders without needing a full device• Works well with the existing Apple ecosystem• Can provide haptic feedback for real-time alerts, enhancing user awareness without being intrusive	<ul style="list-style-type: none">• Smaller display restricts the amount of information and interaction possible at once• Complex tasks or interfaces are difficult to manage on such a small screen• Not all students own or regularly use wearable devices like the Apple Watch• Lack of an intuitive text input method for group management or communication

VR STUDY ASSISTANT

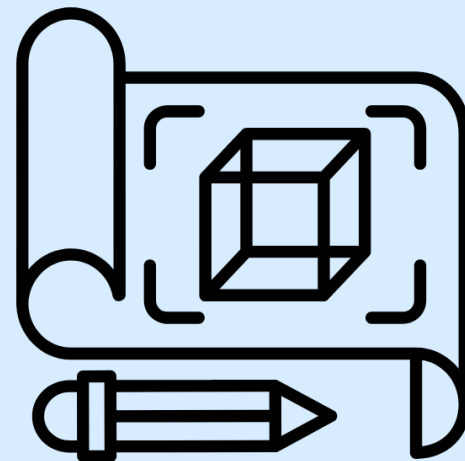
Pros	Cons
<ul style="list-style-type: none">● VR is a medium that can incorporate many different tools: whiteboard, different pages, interfaces, and is good for creative visualizations● Novel, the bot acts as a moderator and learns with the group and provides direction when stuck● Like an additional member of the group, can take care of busywork or scheduling, and task delegation	<ul style="list-style-type: none">● Not everyone studies on VR and would alienate people that prefer to work in person● If working in person, would have to start up the application for the group for this to work● Less user friendly, might have a more complicated UI or interface to study● Could be distracting and not the most optimal medium for studying

NATIVE MOBILE APP

Pros	Cons
<ul style="list-style-type: none">● Familiar, intuitive, and a balance of icons, text, and buttons● Can be accessed easily without special hardware or devices● Simple to update and iterate based on feedback● Easier to navigate for users and a lower learning curve – makes it simple for the user	<ul style="list-style-type: none">● Hard to stand out, novelty is where this needs to shine● If the interface isn't intuitively designed, it can be difficult to navigate

04

LO-FI PROTOTYPE





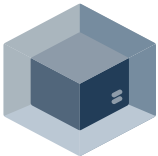
Simple

The user can discover public open study sessions for a class



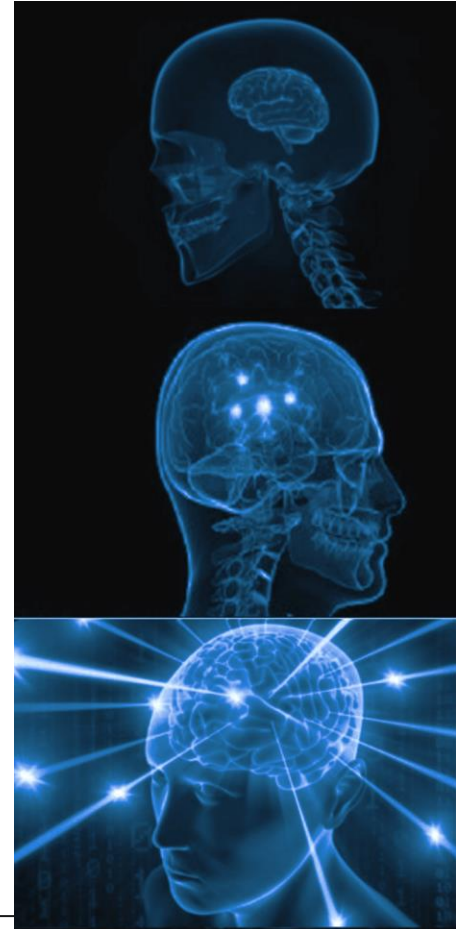
Moderate

the user can upload class syllabi and assignments to get AI powered study plans and group project task delegation



Complex

the user can create a study profile and get matched with recurring partners/study groups



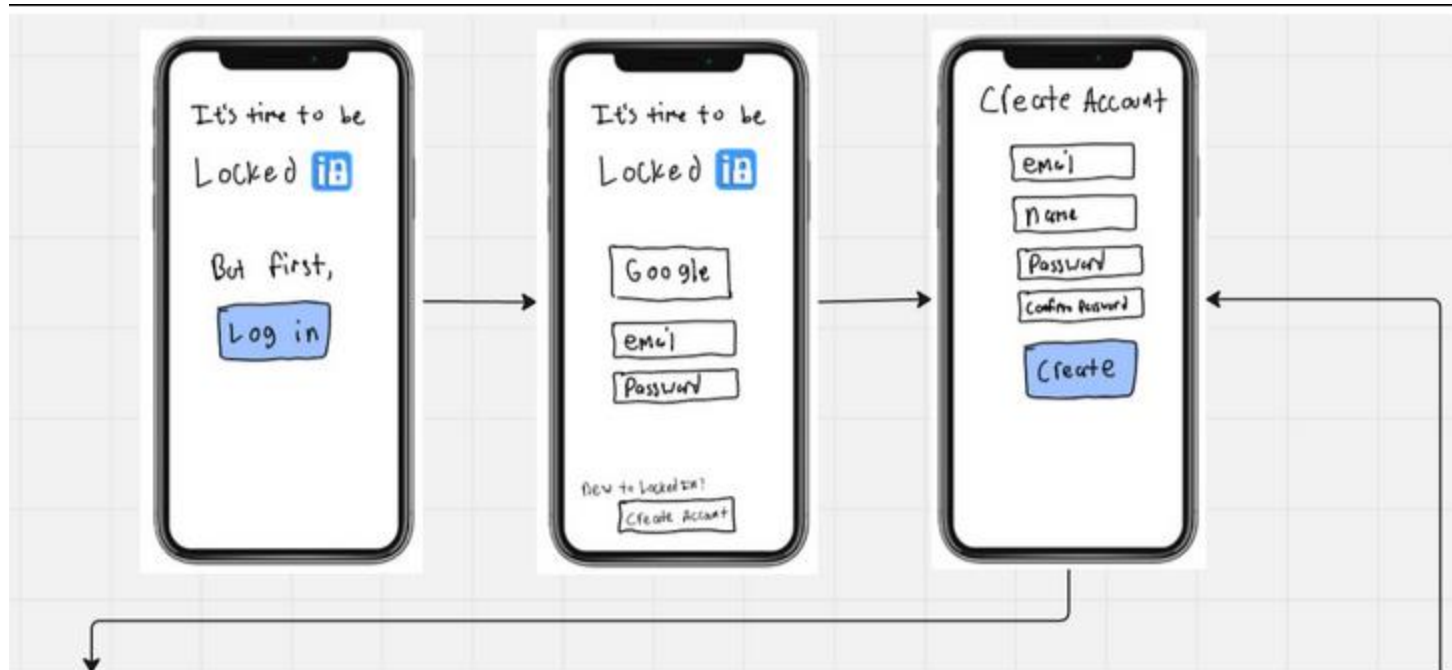


Figure 7. Initial account creation and introductory screens.

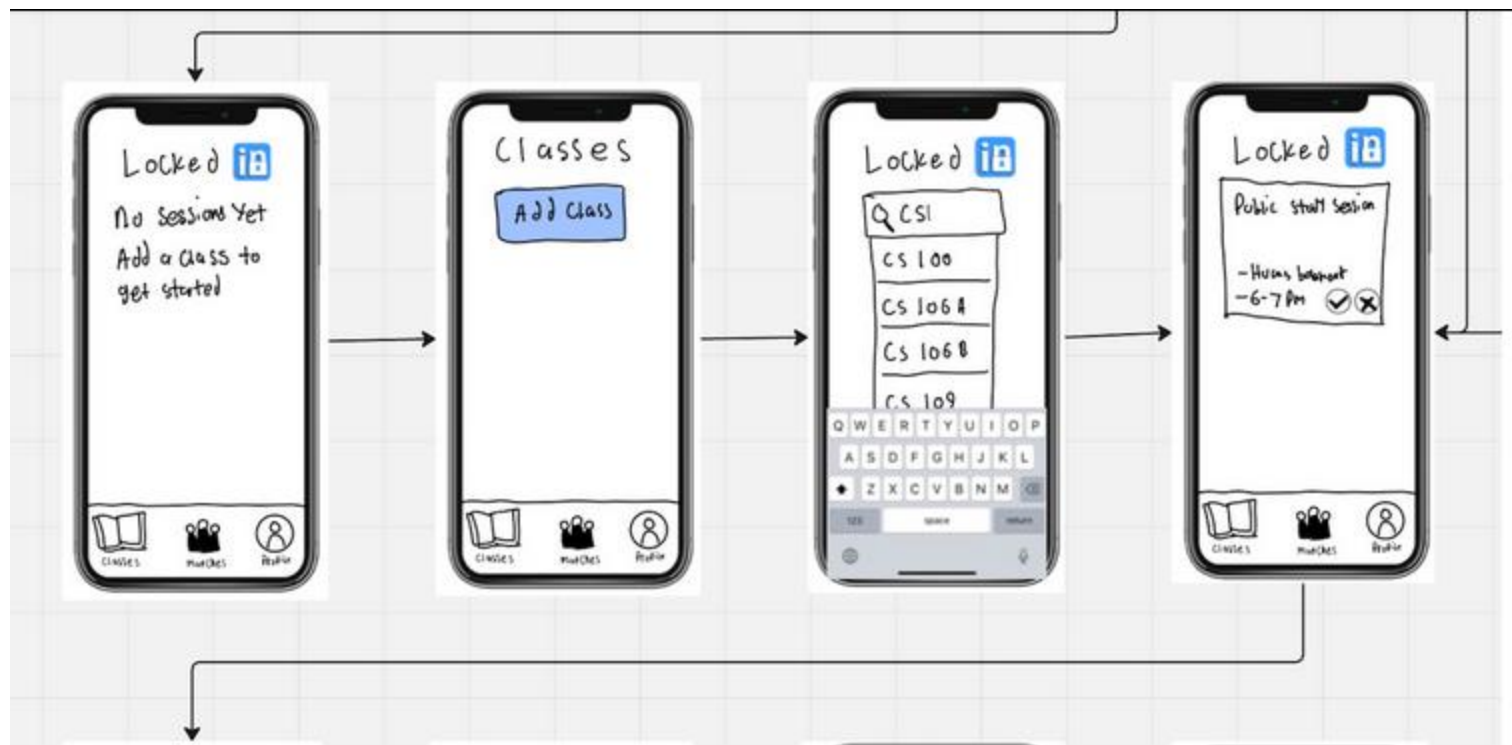


Figure 8. Adding courses and viewing open study sessions flow [simple task].

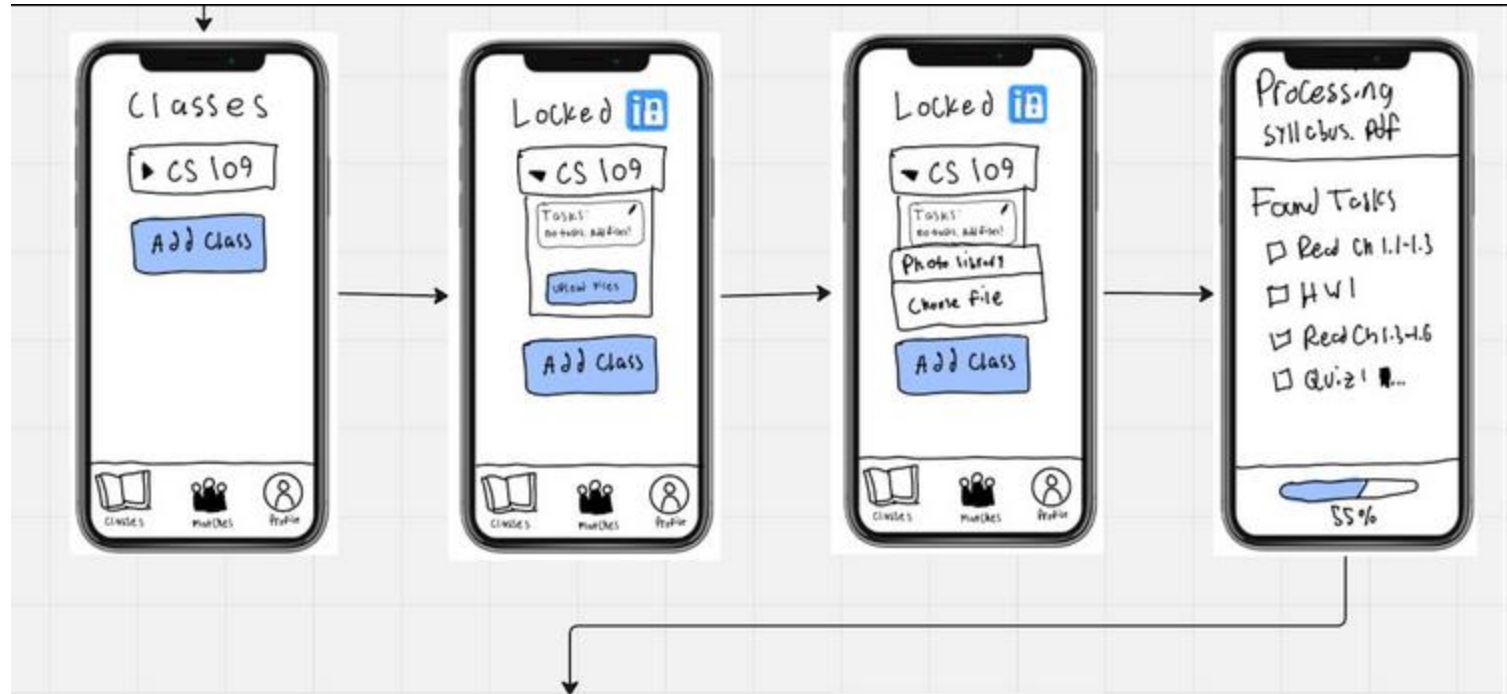


Figure 9. Uploading documents like syllabus and task creation flow via AI

Moderate Task

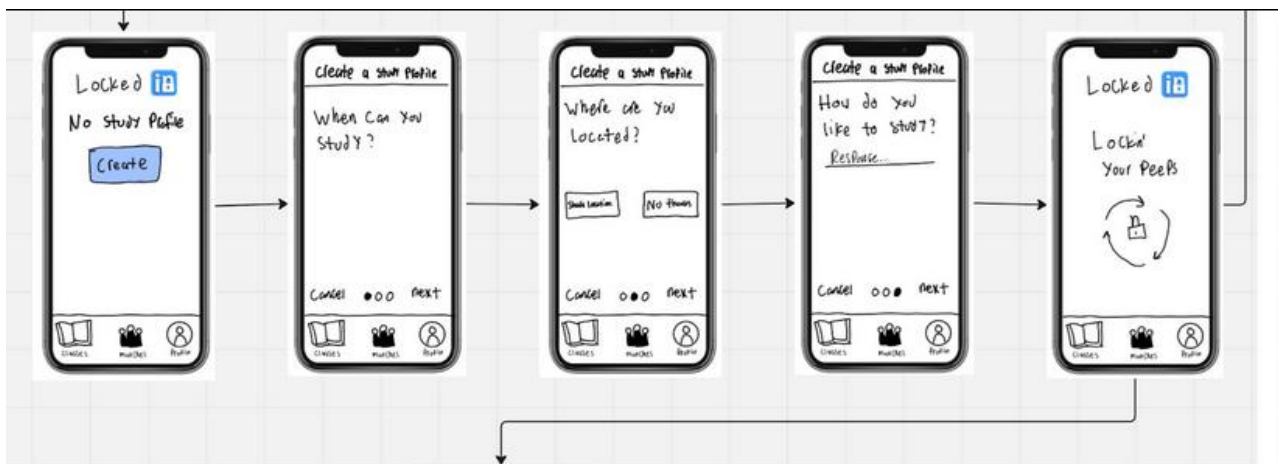


Figure 11. Creating a study profile and initializing match-making flow via AI

Complex Task

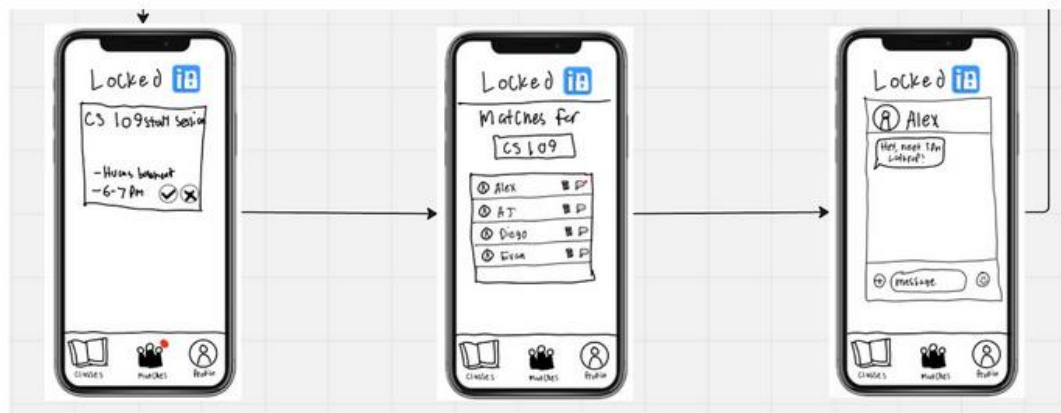
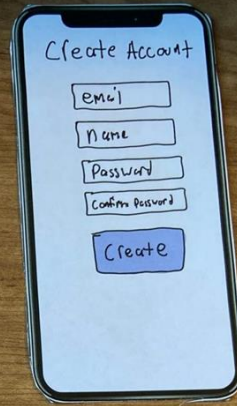


Figure 12. Viewing matches and conversation task flow.




05

USER TESTING



User Testing Process

- Found users from our target demographic (undergraduate students)
- Channels: Asking friends & dorm slack if they have friends or family visiting from other colleges
- Lo-Fi realization: Printed and cut out drawn phone screens
- Operation: User speaks aloud their process and uses hand gestures. Computer hands the appropriate next screen
- Recording methodology: Hugging laptop method.
- Analysis methodology: We watched the recordings afterwards and noted the critical incidents
- Compensation: Varied, but was easy and effective to buy boba for the user as compensation

Locked 

CS 109

Forgot
password?

Sign In

Join Class

User Test 1 - Senior at Stanford



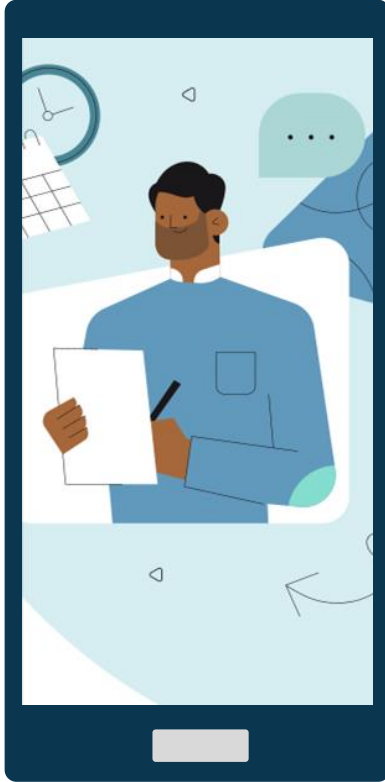
Stock Image by StockImages

Context

- Originally from Portland
- International Relations Major
- Chair at Democracy Day
- Met at EVGR (on-campus), in his room
- No compensation needed
- Roles: AJ facilitated, Diego took notes

Critical Incidents

- [3] Didn't understand which tab he was on and said he wished he could see which bottom looked "pressed on" to have a sense of where he is
- [0] Navigated the prototype without any challenges or clarifying questions saying that it was "intuitive"
- [0] Understood our mission and tasks clear and told the interviewer directly, without prompting
- [2] Wished that the time windows in the questionnaire were more flexible



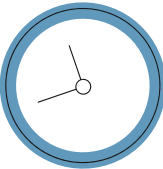
Key learnings



Could use more responsiveness when switching between tabs (task flows) in the footer



Wants more open flexibility and detail in the study profile survey



User Test 2 - Junior @ Cornell



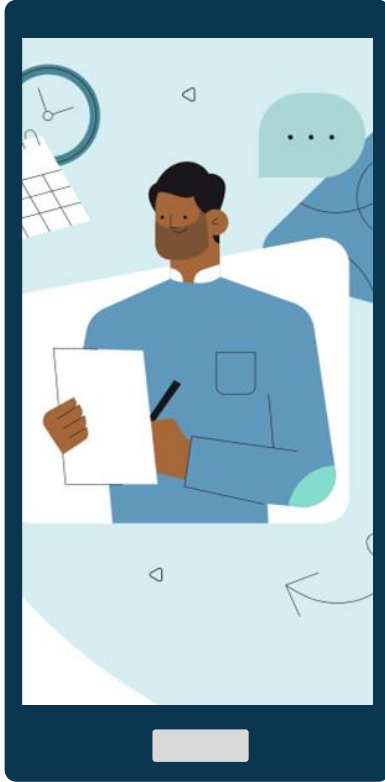
Stock Image by Unsplash

Context

- Hometown in bay area
- Sibling of someone in my dorm
- Compensated with boba
- Roles: Alex facilitated, Evan took notes

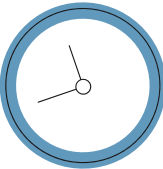
Critical Incidents

- 3 Didn't notice red notification on profile tab, was confused for several seconds
- 0 Was easily able to select possible study times in the future (assumption #2)
- 0 Answered placeholder questions on study habits
- 2 seemed disappointed that only responsiveness to accepting study session was a blue circle check mark
- 3 didn't notice red notification on matches tab, was confused for several seconds



Key learnings

- Need to direct user between task sections in a obvious and intuitive way
- Need more responsiveness and juice for accepting study sessions



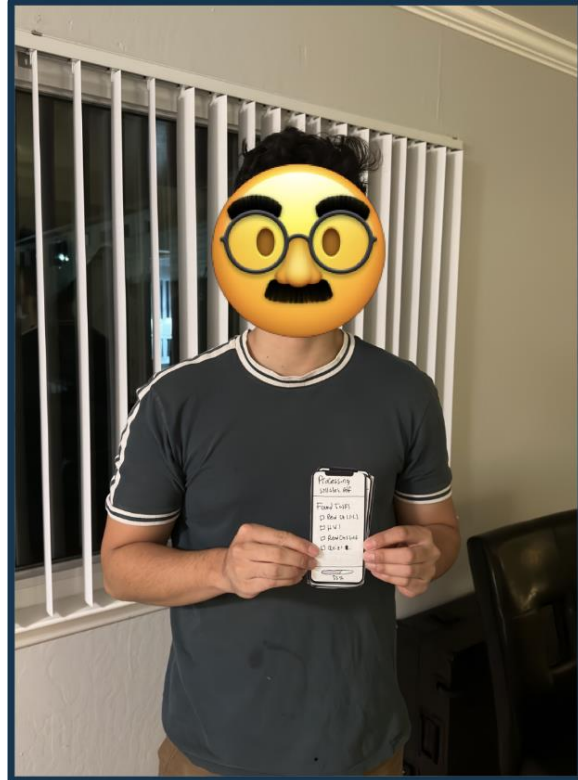
User Test 3 - Senior @ SJSU



Context

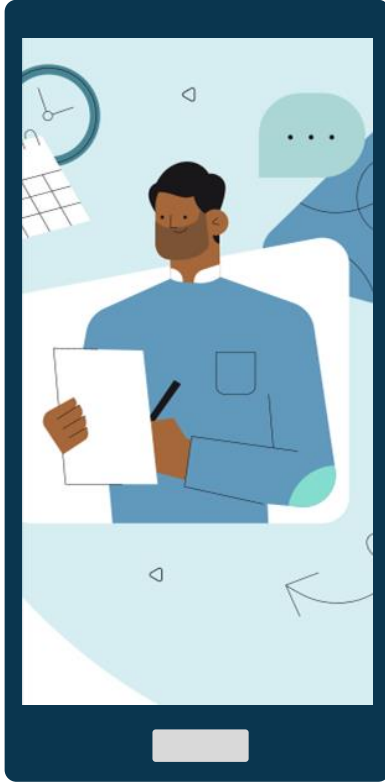
- Senior at SJSU
- Friend of a friend
- Bought them Boba + Korean Corn Dogs
- Roles: Diego facilitated, AJ took notes

User Test 3 - Senior @ SJSU



Critical Incidents

- [0] Create an account and login. Process was seen as easy, familiar, and “standard” to an everyday app.
- [1] Add a new class. Was a little confused on what was going on after being redirected to homepage. User noted they would have wanted “a little blurb to tell me what the app is for and how it functions in the beginning”
- [1] Upload class materials. The process of uploading materials was good, but was unclear on what was uploading and why.
- [3] Take the profile survey. Felt that building profiles should be class specific, may have different goals for different classes. Was disappointed in lack of responsiveness when getting a study group match.



Key learnings



Could use landing page / features overview at the beginning of the user experience



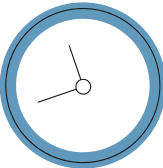
Need more exciting user flow from completed profile to matches and match requests



Need signposting on purpose of uploading class materials



Some users want class-by-class customizability in user survey



User Test 4 - Sophomore at Santa Clara University



Context

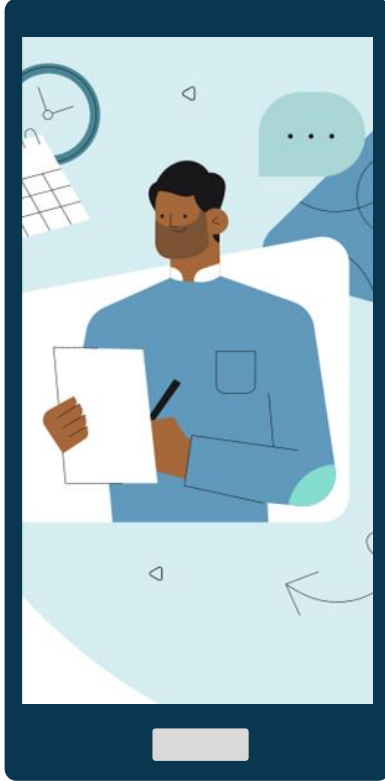
- Sophomore at Santa Clara University
- Roommate's brother who came to visit earlier
- No compensation needed
- Evan facilitated, Alexander took notes

User Test 4 - Sophomore at Santa Clara University



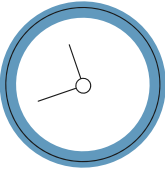
Critical Incidents

- Directed to complete 3 tasks
 - Create an account and login
 - He thought the process was quick and easy
 - Add a new class
 - He was confused after being redirected to homepage after adding a class. "I want to be able to immediately see the changes I made"
 - Upload class materials
 - He was unsure of what the purpose of uploading materials was after navigating the process
 - Take the profile survey
 - He preferred being immediately redirected to match requests after completing the survey



Key learnings

- Need to clearly display newly added class immediately after adding it
- Need more direct user flow from completed profile to matches and match requests
- Need signposting on purpose of uploading class materials

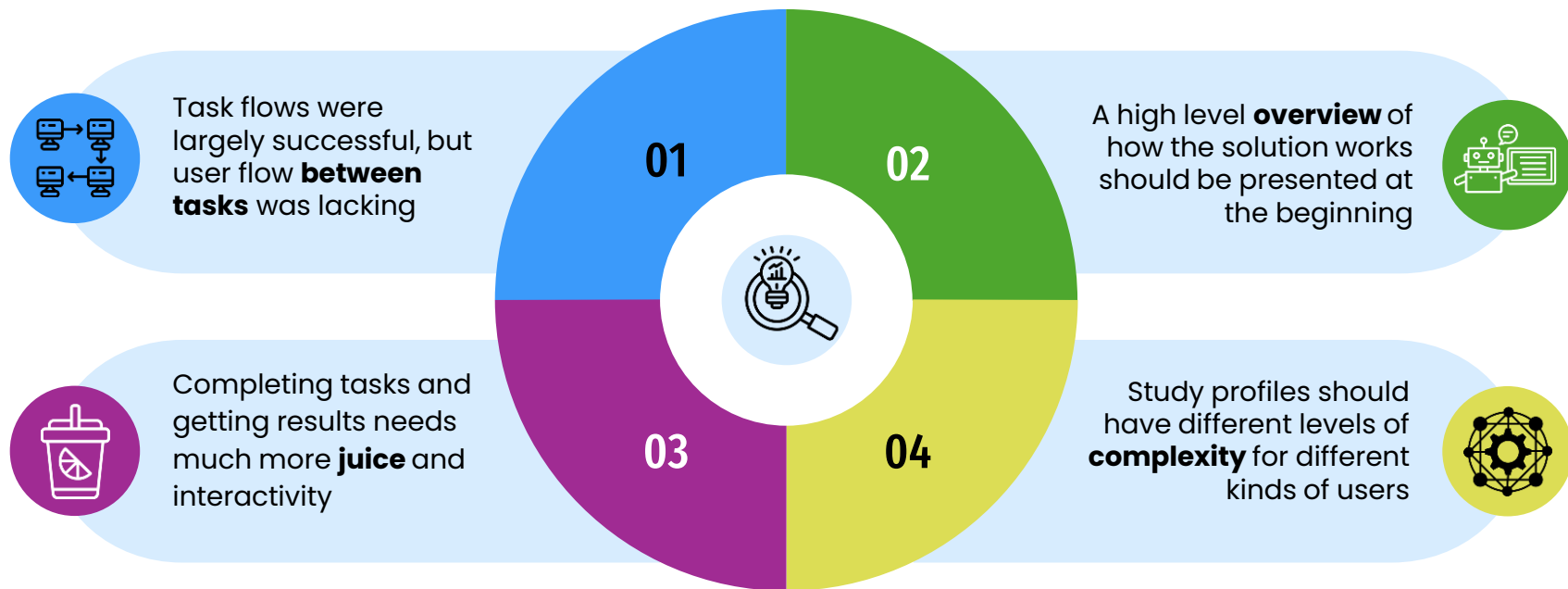


06

DISCUSSION



User Test Key Insights Summary



What's Next?

Changes to make:

- Focus on improving responsiveness and **flow between different tasks** in the Mid-Fi prototype
- Add **explanation** of how features work and why to use them at the beginning of the user experience in the Mid-Fi Prototype

Features to further develop:

- Investigate what **complexity of study profile** different students want and make preliminary surveys at 3 levels
- Explore suggested idea of **banner notifications** for when users get a study partner match or a study group invitation

07

NO APPENDIX
(All content in
above slides)

