LUCKY DAY

clare, em, ethan, lianne

VALUE PROPOSITION

Connecting Hearts, Protecting Minds

Helping seniors build new friendships and find connection through culturally aligned events and activities.

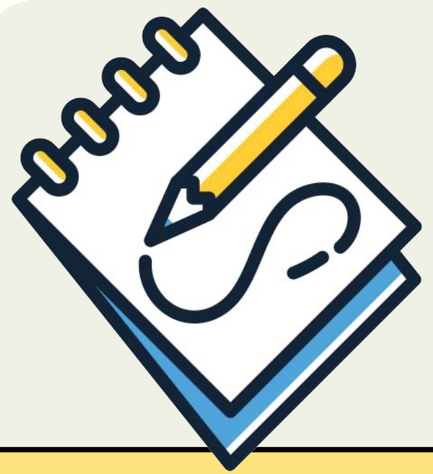
PROBLEM STATEMENT

Older adults who face language barriers and cultural differences struggle to find social connection in their communities, leading to loneliness and raising their risk of dementia and cognitive disorders.

SOLUTION

A tablet app for seniors offering a social calendar with language support and culturally-tailored activities, enabling seniors to easily discover, join, and organize events that resonate with their cultural background and fostering social connections to prevent the onset of dementia and cognitive disorders.

ROADMAP



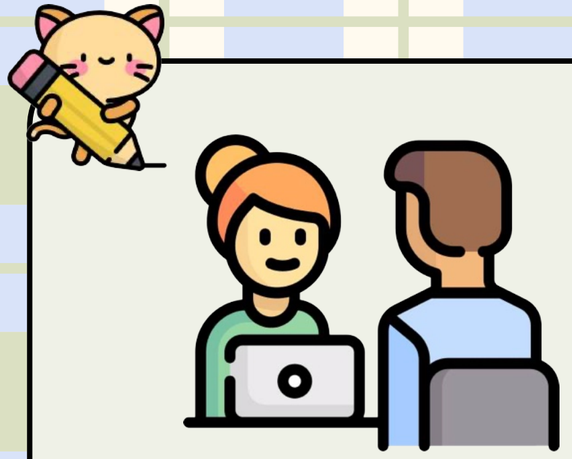
SKETCHES

SELECTED INTERFACE

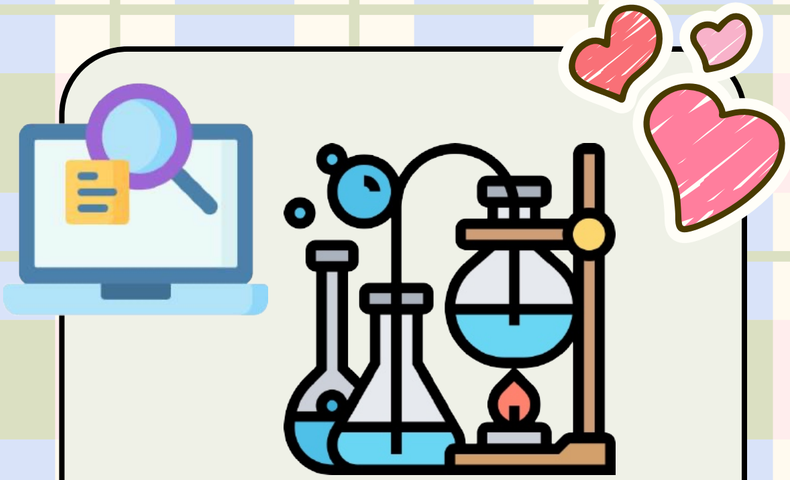
LOFI CONSTRUCTION

ROADMAP

LOFI PROTOTYPE

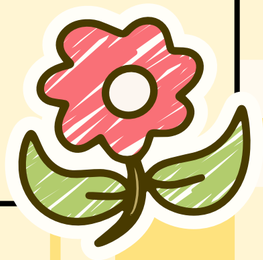


TESTING METHODOLOGY



TESTING RESULTS

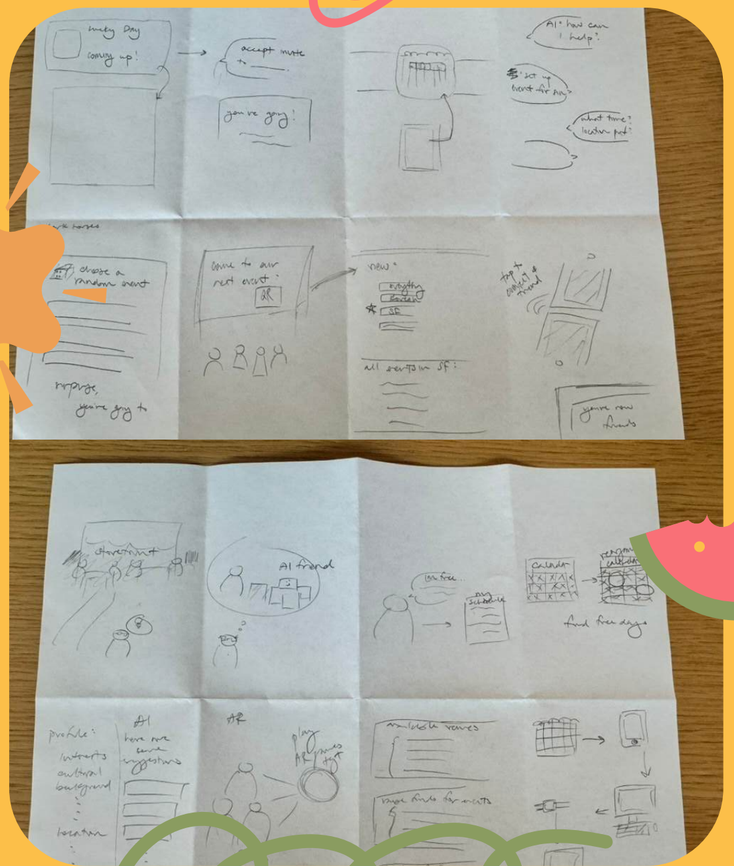
SKETCHES



SKETCHING EXPLORATIONS

Two rounds of Crazy-8s.

Categories: visual notifications, speech control, wearables, chat-based systems, AR, VR, Dark Horse, etc.



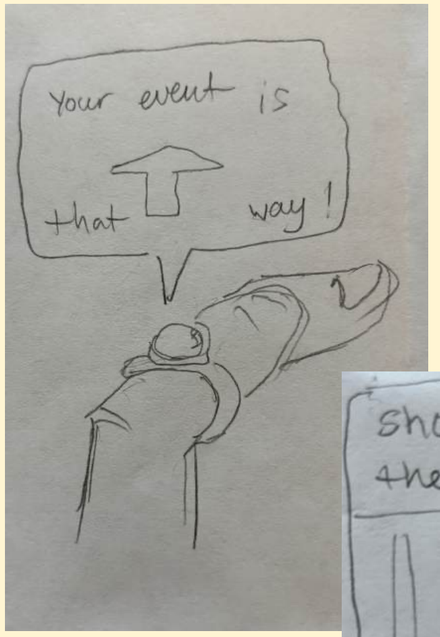
SKETCHING: REALIZATIONS

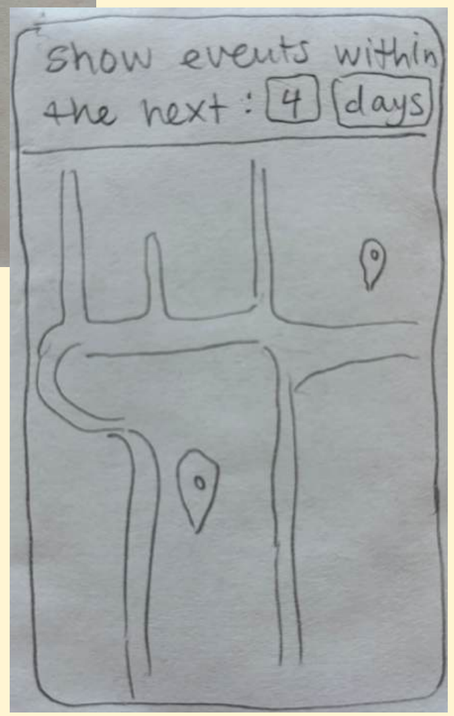
Product 1: Ring Projector

Wearable application that provides seniors with directions to nearby events

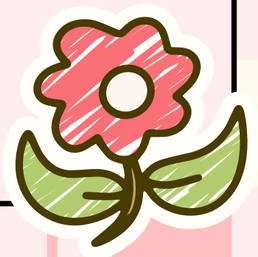
Product 2: iPad App

Live map of social events with ability to filter events by preferences and create your own events.





SELECTED INTERFACE



RING PROJECTOR

PRO

- Straightforward and serves a single purpose, making it easy to learn and use.
- Helps seniors avoid getting lost by providing simple, step-by-step directions.
- Especially helpful for those who can’t read signs in English.
- Location services for seniors to navigate streets and for caretakers to track them

CON

- Not enough information for joining, posting, or searching for events.
- Would function better as an extension to existing infrastructure rather than a standalone device.
- Device too small for seniors to read directions.
- Prone to damage or loss due to size and wear

IPAD APP

PRO

- Can use while propped up on a stand or in a case (comfortable for at home use).
- Easier for typing; less frustrating than small keyboard on phone.
- Large surface allows for more features on the screen and larger text (easier to see).
- Seniors often already own tablets/iPads

CON

- Bulkier and less convenient to carry around an iPad.
- Potentially no access to data while in transit, which could be crucial for last-minute updates or changes to events.
- Less hands-free usage; needs more user interaction.
- On-the-go usage may cause dangers for seniors (lower situational awareness during usage)

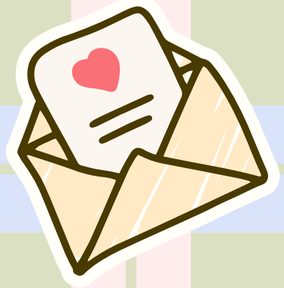
SELECTED INTERFACE

..drumroll..

SELECTED INTERFACE

iPad App!

LOFI CONSTRUCTION



PROTOTYPE CREATION

OUR PROCESS

01

Storyboard

Plan out interface and features. Understand how many screens & transitions might be necessary for the features we want to include.

02

Build

Handcrafted prototype with pen, paper, scissors, and tape. Printed iPad-sketched calendar for recurring scenes.

03

Features

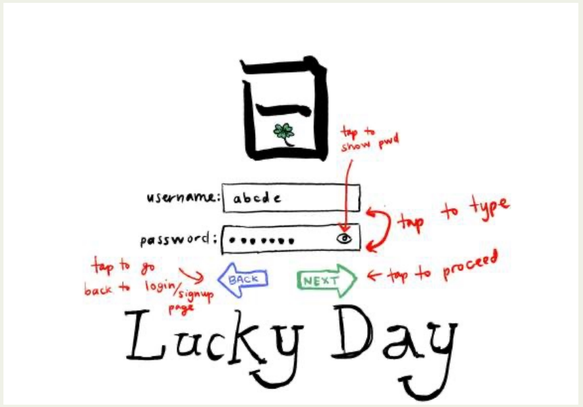
(1) Login/sign-up (2) Build profile (3) View events (3) Filter events (4) Create your own events (5) View messages from friends

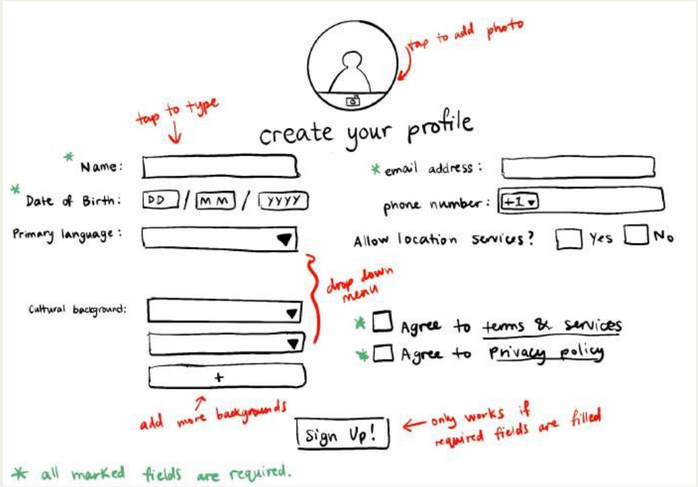
04

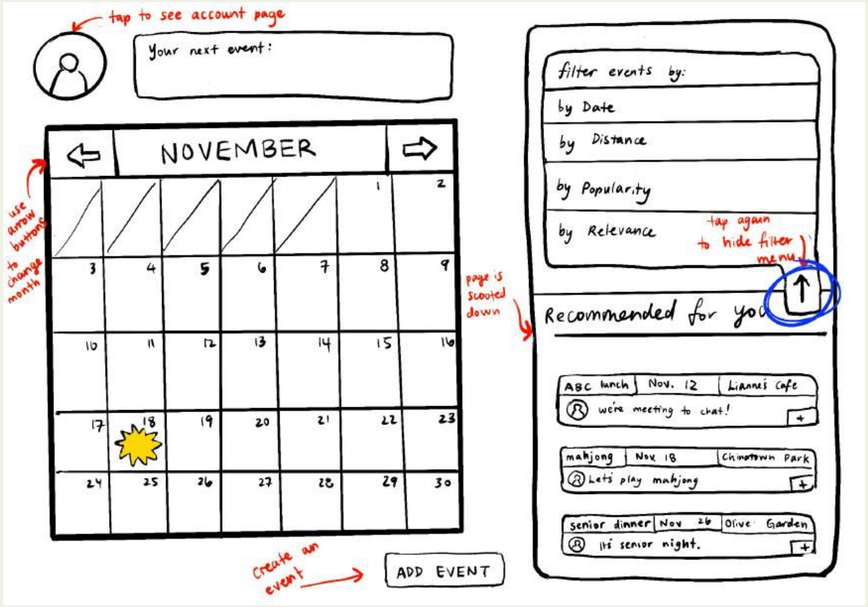
Interactions

(1) Click to login/sign-up (2) Type to fill out profile (3) Scroll to view events (4) Click to add event to your calendar (5) Type and click to filter events and create your own

STORYBOARD


tap to show pwd
username: abcde
password:
tap to type
tap to go back to login/signup page
BACK
NEXT
tap to proceed
Lucky Day

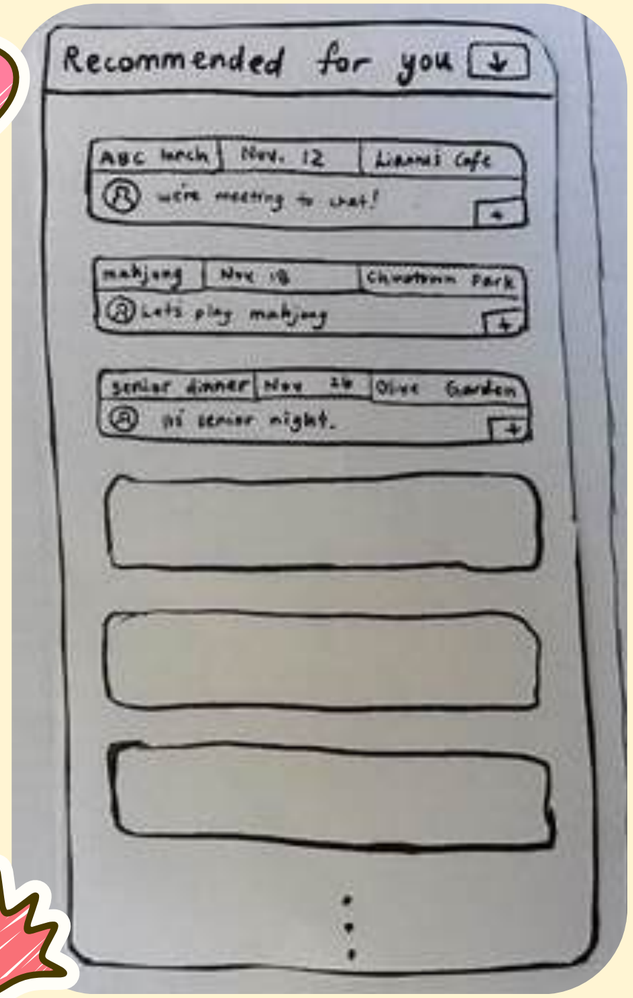

tap to add photo
tap to type
create your profile
Name:
email address:
Date of Birth: DD / MM / YYYY
phone number: +1
Primary language:
Allow location services? Yes No
drop down menu
Cultural background:
Agree to terms & services
Agree to Privacy policy
add more backgrounds
Sign Up!
only works if required fields are filled
all marked fields are required.


tap to see account page
Your next event:
NOVEMBER
use arrow buttons to change month
page is scooted down
filter events by:
by Date
by Distance
by Popularity
by Relevance
tap again to hide filter menu
Recommended for you
ABC lunch | Nov. 12 | Lianne's cafe
we're meeting to chat!
mahjong | Nov 18 | Chinatown Park
Let's play mahjong
senior dinner | Nov 26 | Olive Garden
its senior night.
Create an event
ADD EVENT

LOFI PROTOTYPE

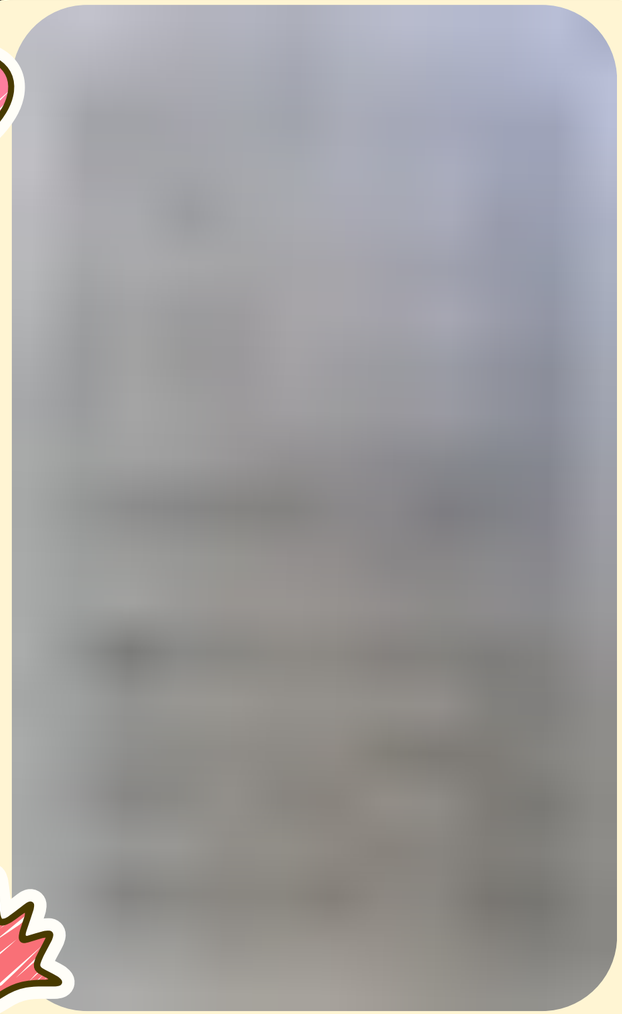
SIMPLE

User starts on the main page and adds recommended events onto any given day.



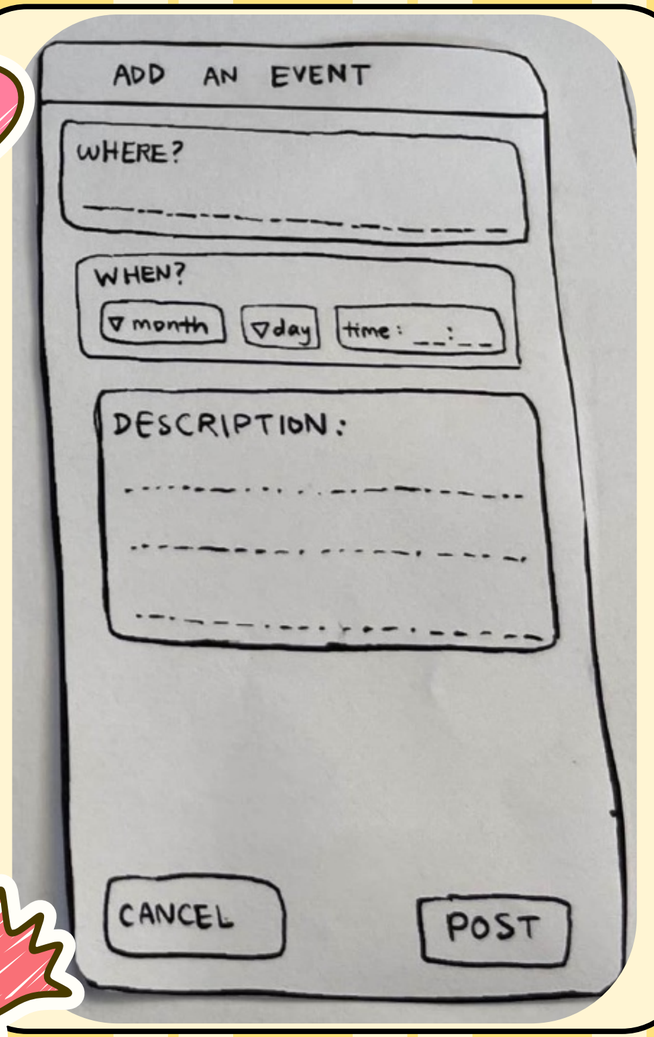
MODERATE

User starts on the main page and swipes through to the following month and taps on a new day to pull up more recommended events. They add a recommended event and then change to all events tab and add a non-cultural event.

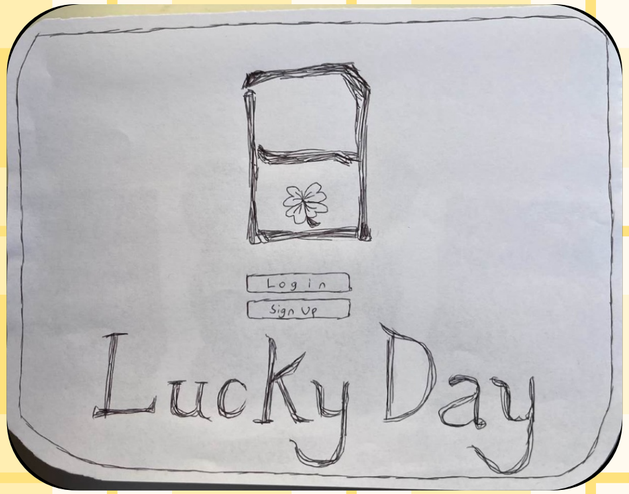


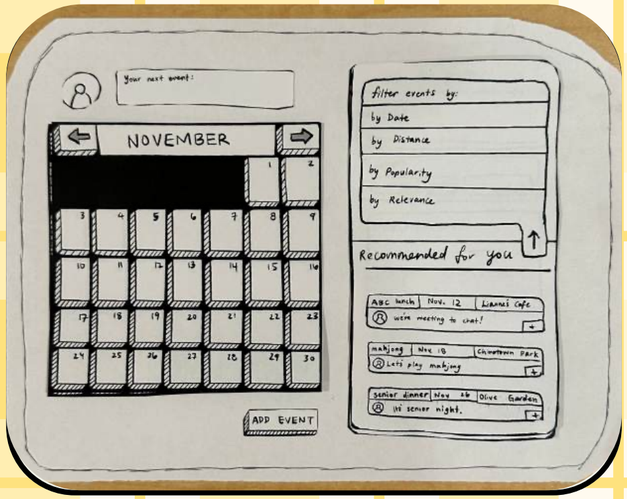
COMPLICATED

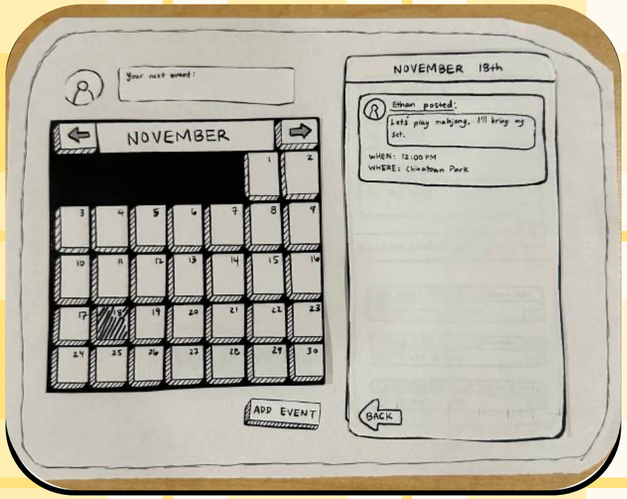
User starts on the main page and picks a specific day and looks at what events are going on/might conflict. They find an empty time slot and click the “new event” button. They create and publish their own event and add appropriate tags for the algorithm to sort it. They go back to the main page and see their event on the right list + add it to their own calendar.

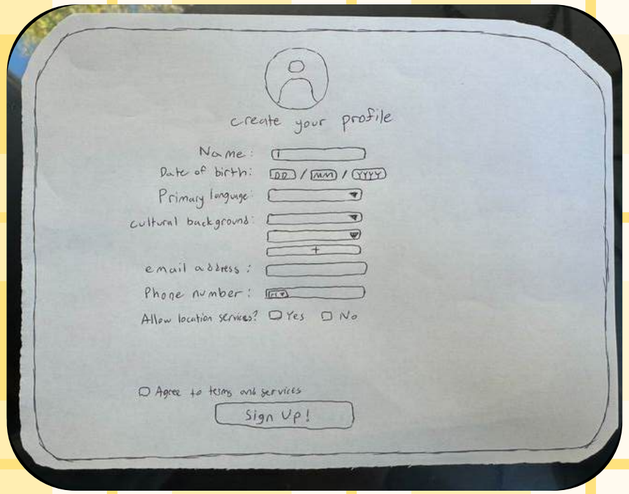


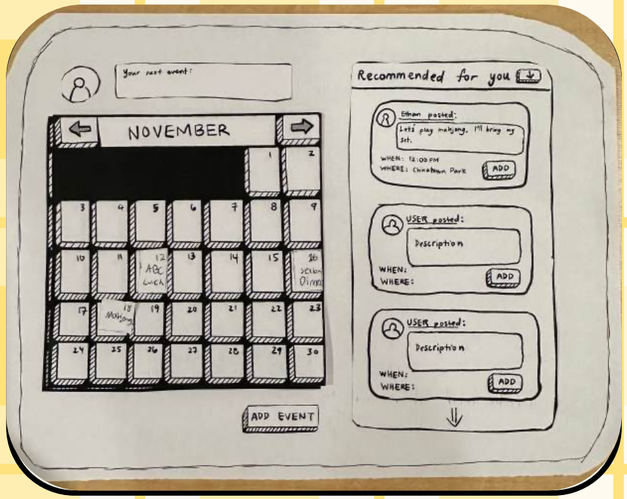
SCREENS

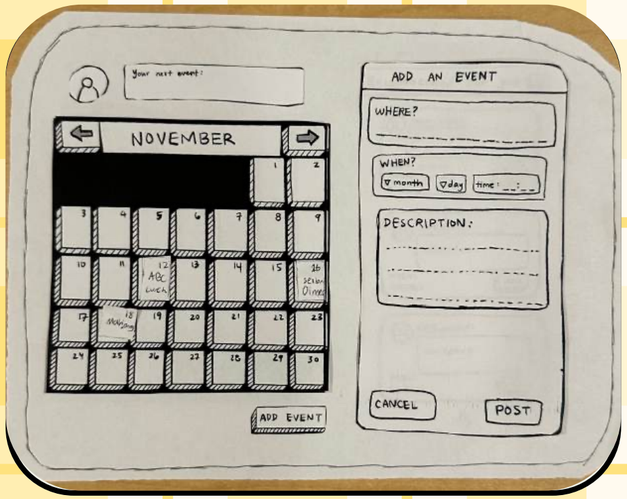

Log in
Sign Up
Lucky Day


Your next event:
NOVEMBER
filter events by:
by Date
by Distance
by Popularity
by Relevance
Recommended for you
ADD EVENT

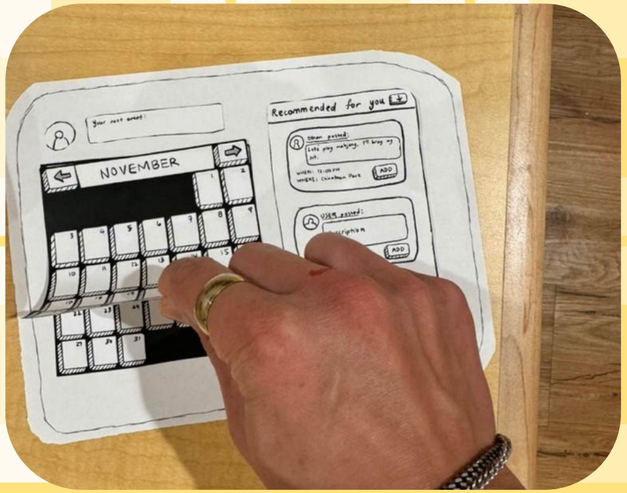

Your next event:
NOVEMBER
NOVEMBER 18th
Ethan posted:
Let's play mahjong. I'll bring my set.
WHEN: 12:00 PM
WHERE: Chinatown Park
ADD EVENT
BACK

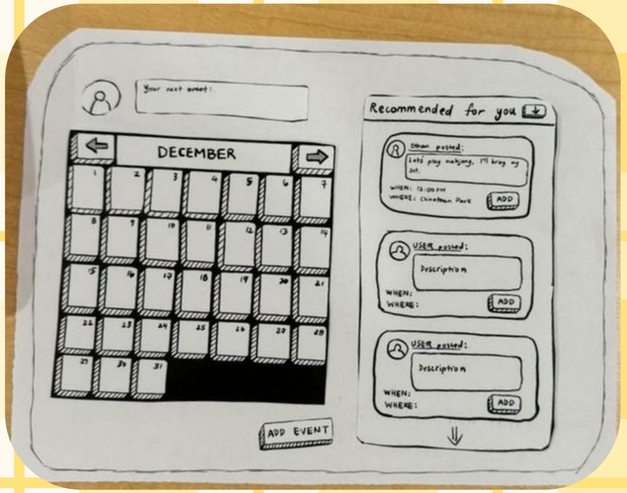

create your profile
Name:
Date of birth: DD / MM / YYYY
Primary language:
cultural backgrounds:
email address:
Phone number:
Allow location services? Yes No
Agree to terms and services
Sign Up!

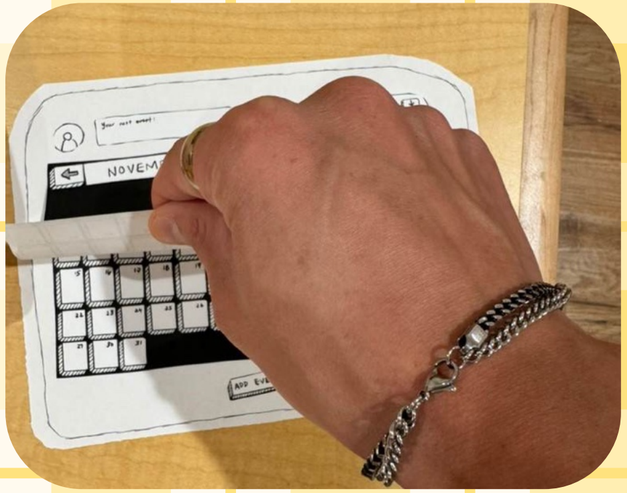

Your next event:
NOVEMBER
Recommended for you
Ethan posted:
Let's play mahjong. I'll bring my set.
WHEN: 12:00 PM
WHERE: Chinatown Park
ADD
USER posted:
Description
WHEN:
WHERE:
ADD
USER posted:
Description
WHEN:
WHERE:
ADD
ADD EVENT

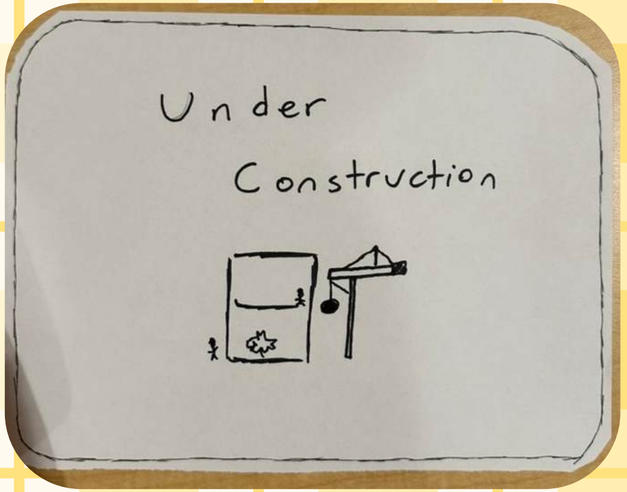

Your next event:
NOVEMBER
ADD AN EVENT
WHERE?
WHEN?
month
day
time
DESCRIPTION:
ADD EVENT
CANCEL
POST

SCREENS

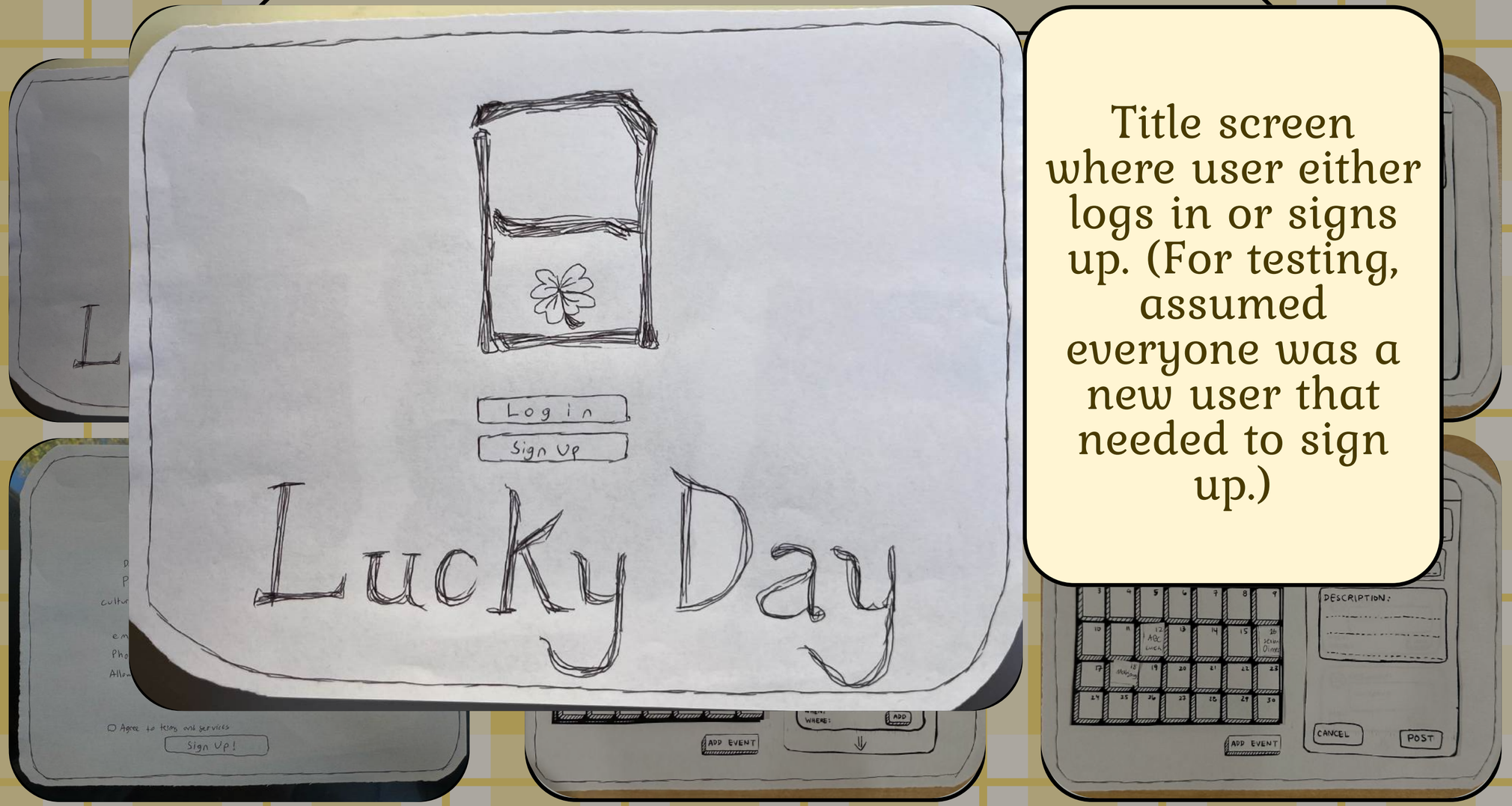

Your next event:
Recommended for you
NOVEMBER
Other posted:
Lets play mahjong, I'll bring my cat.
WHEN: 12:00 PM
WHERE: Chinatown Park
ADD
User posted:
Description
WHEN:
WHERE:
ADD


Your next event:
Recommended for you
DECEMBER
Other posted:
Lets play mahjong, I'll bring my cat.
WHEN: 12:00 PM
WHERE: Chinatown Park
ADD
User posted:
Description
WHEN:
WHERE:
ADD
User posted:
Description
WHEN:
WHERE:
ADD
ADD EVENT


Your next event:

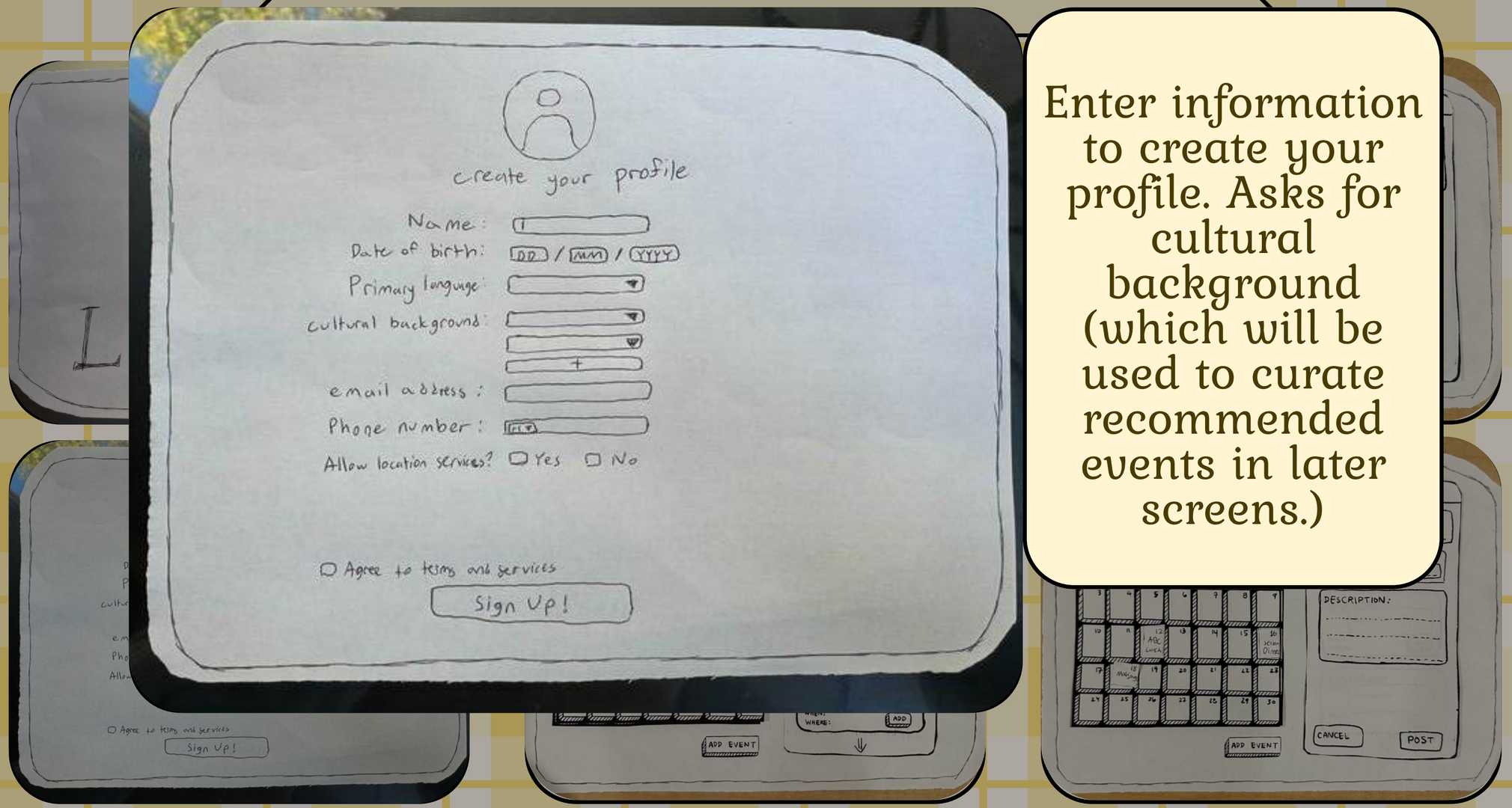

Under
Construction

SCREENS



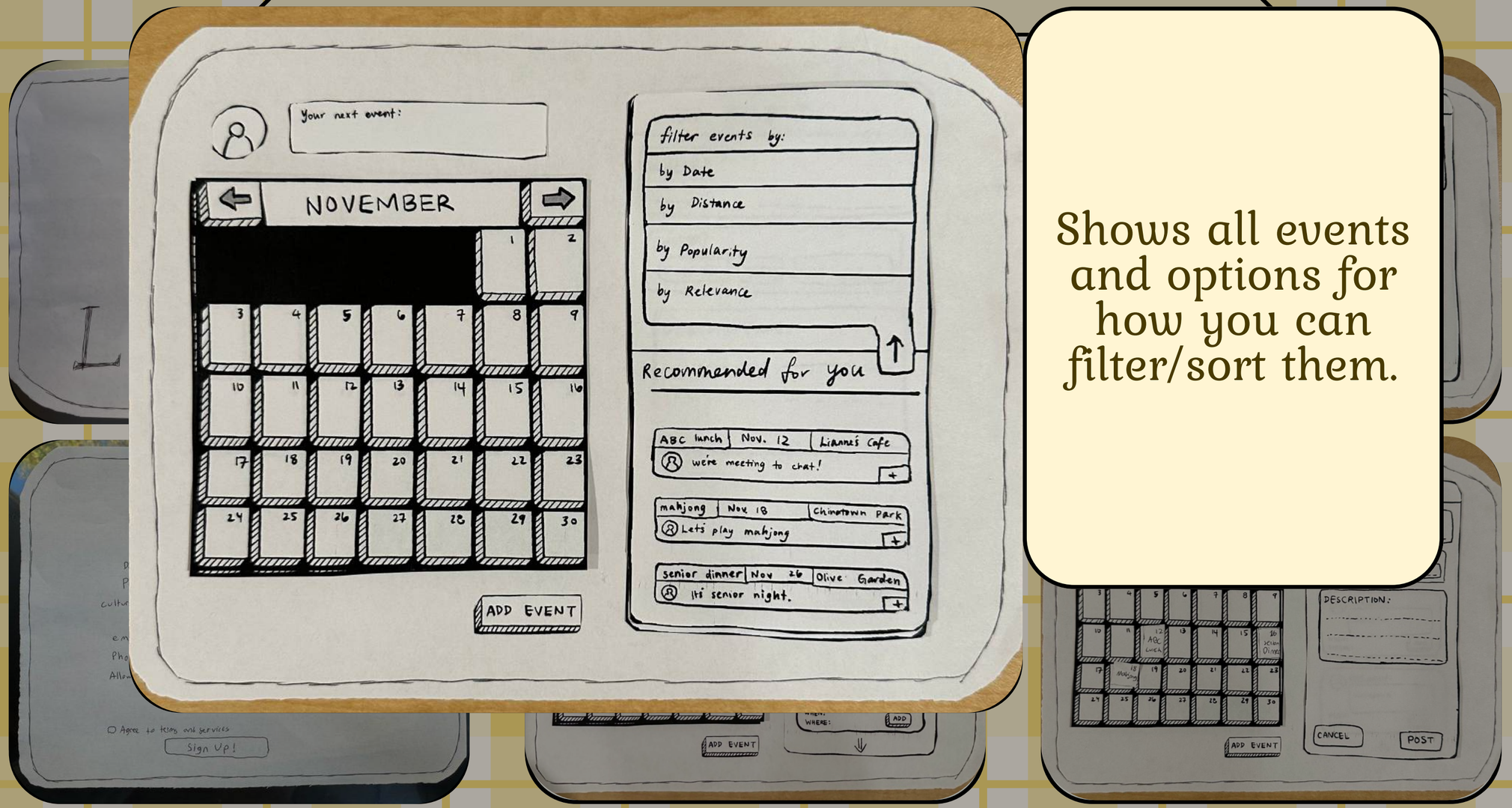
Title screen where user either logs in or signs up. (For testing, assumed everyone was a new user that needed to sign up.)

SCREENS



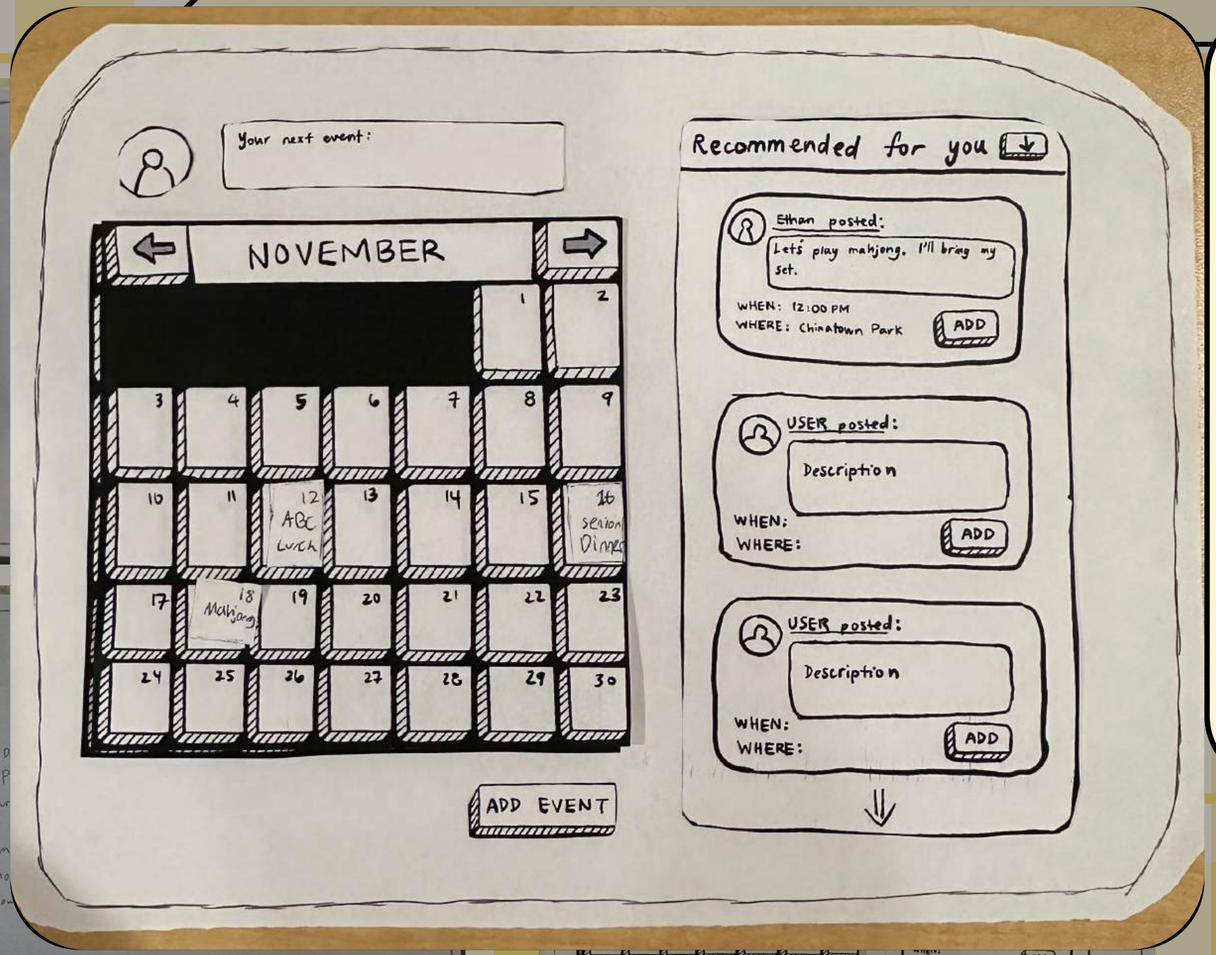
Enter information to create your profile. Asks for cultural background (which will be used to curate recommended events in later screens.)

SCREENS



Shows all events and options for how you can filter/sort them.

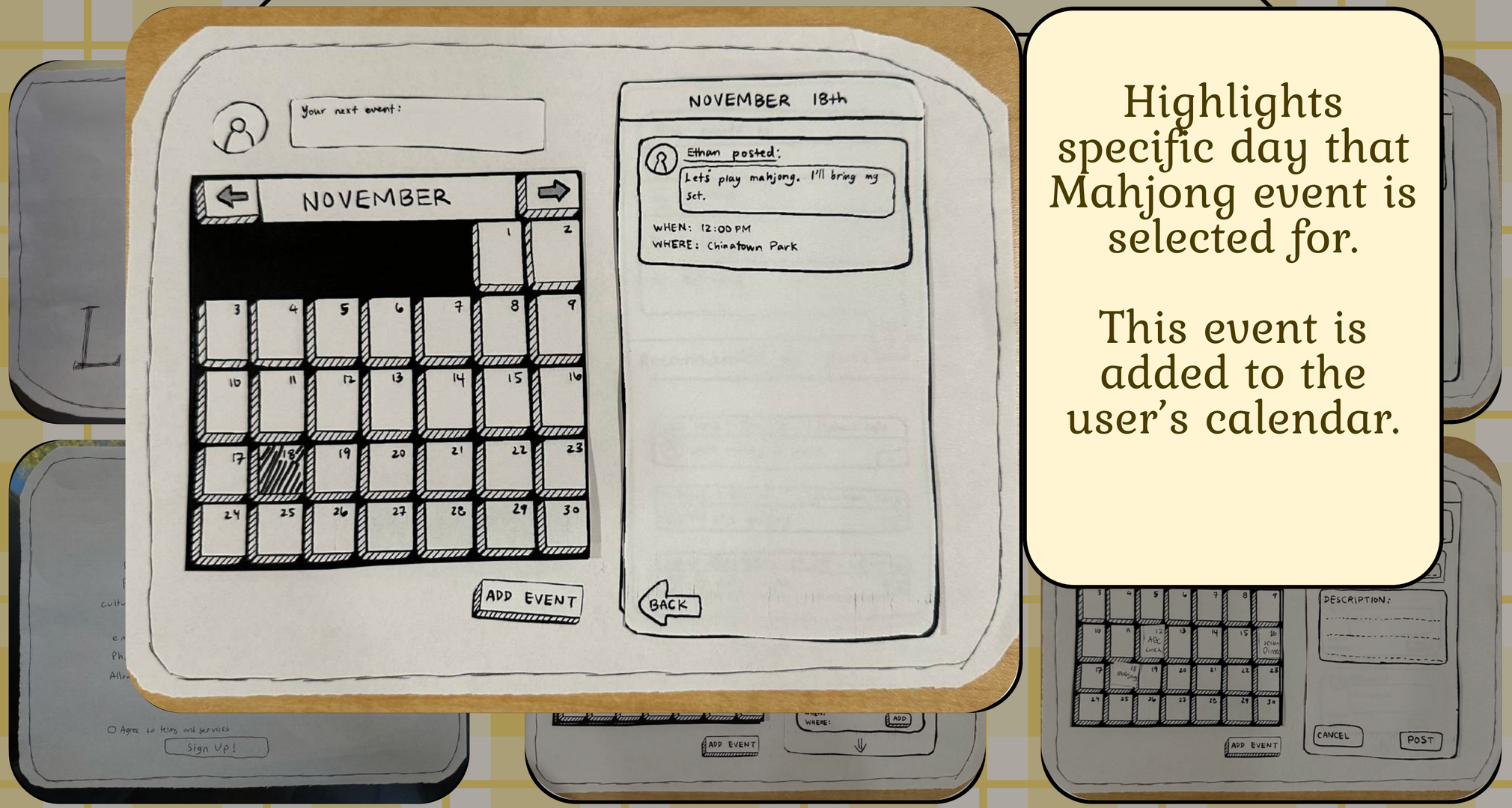
SCREENS



Events are sorted by recommended based on cultural background.

Here, user can add Mahjong (first event) to their calendar.

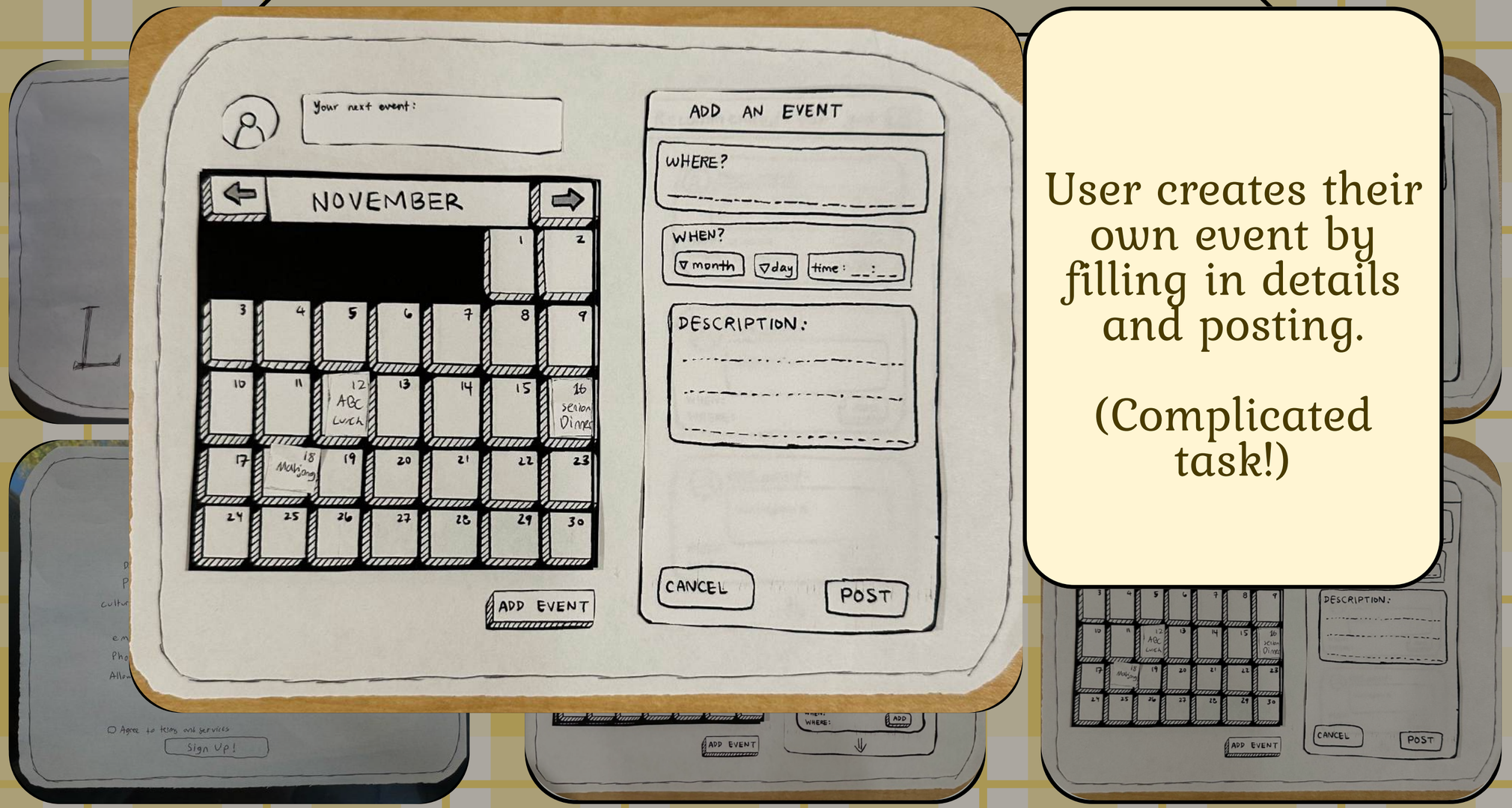
SCREENS



Highlights specific day that Mahjong event is selected for.

This event is added to the user's calendar.

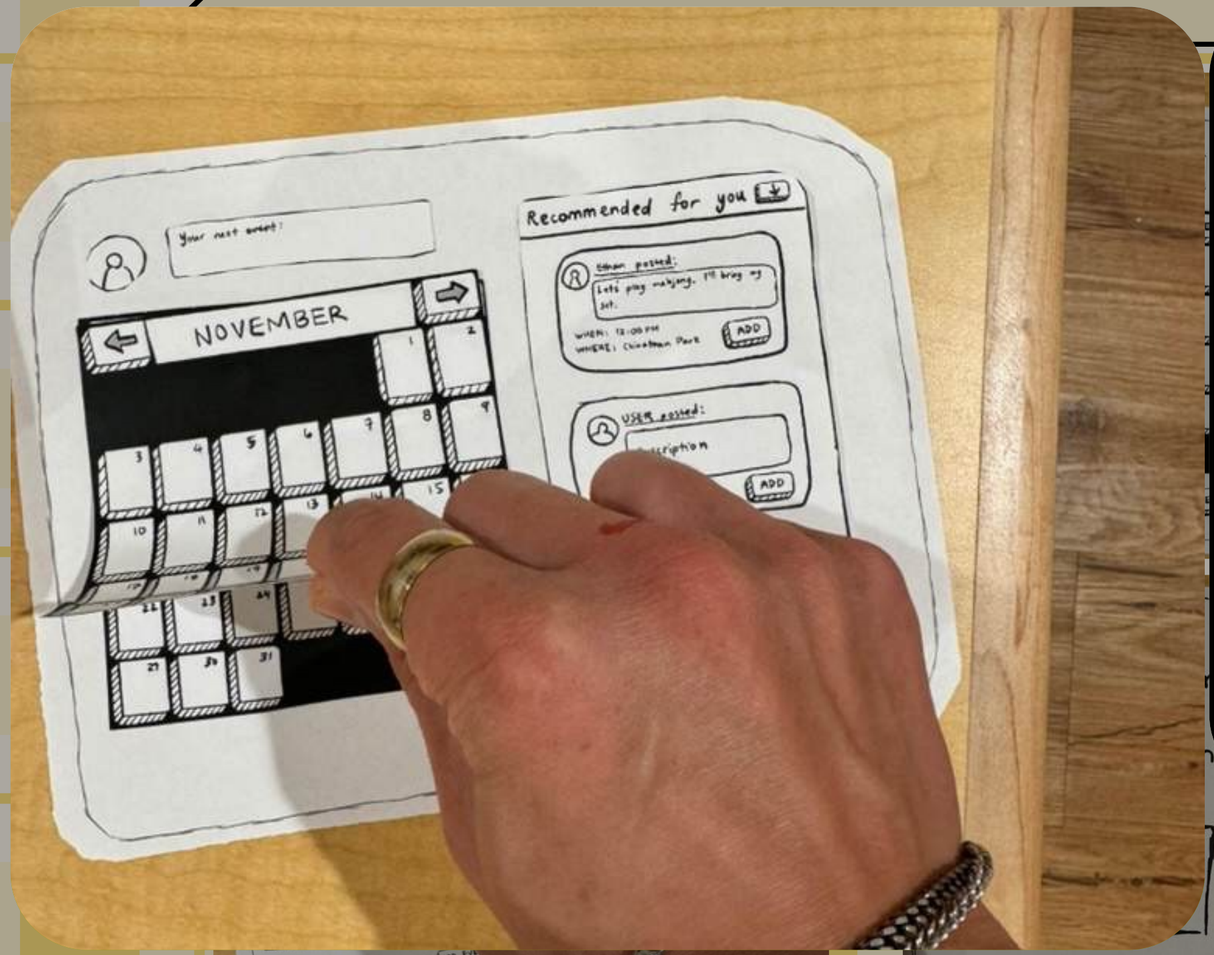
SCREENS



User creates their own event by filling in details and posting.

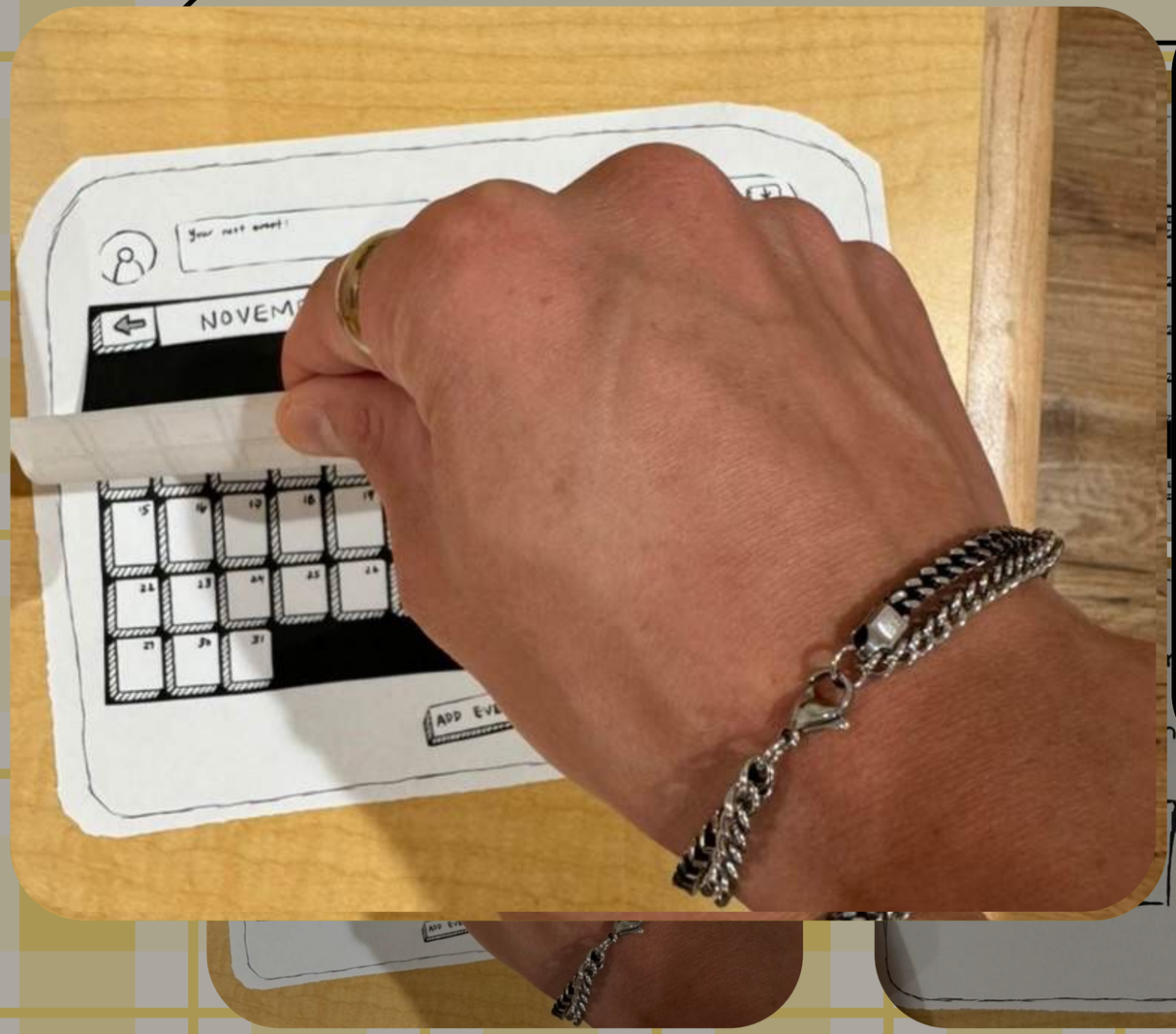
(Complicated task!)

SCREENS



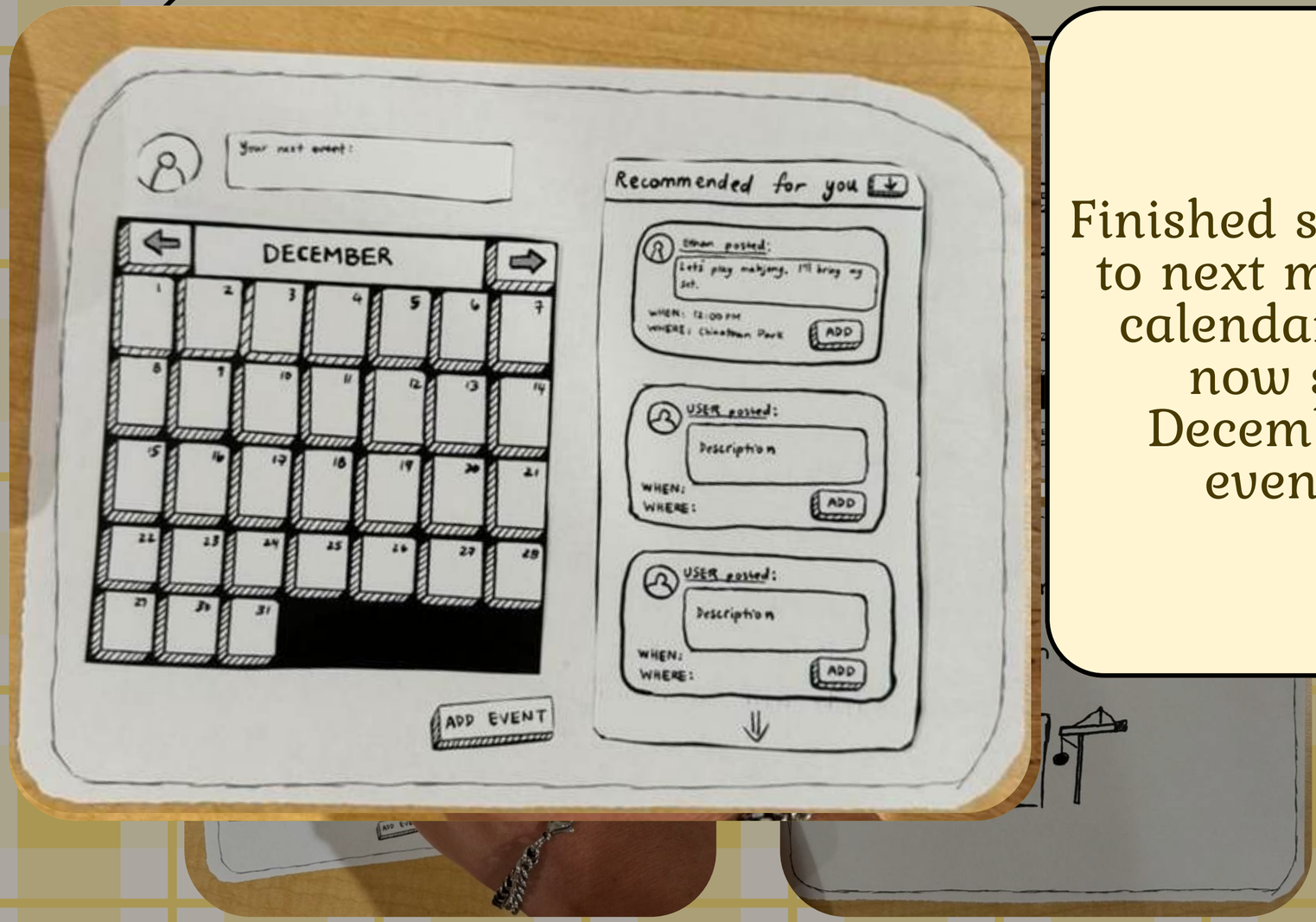
Scrolling mechanism (press arrow to see the next month's calendar).

SCREENS



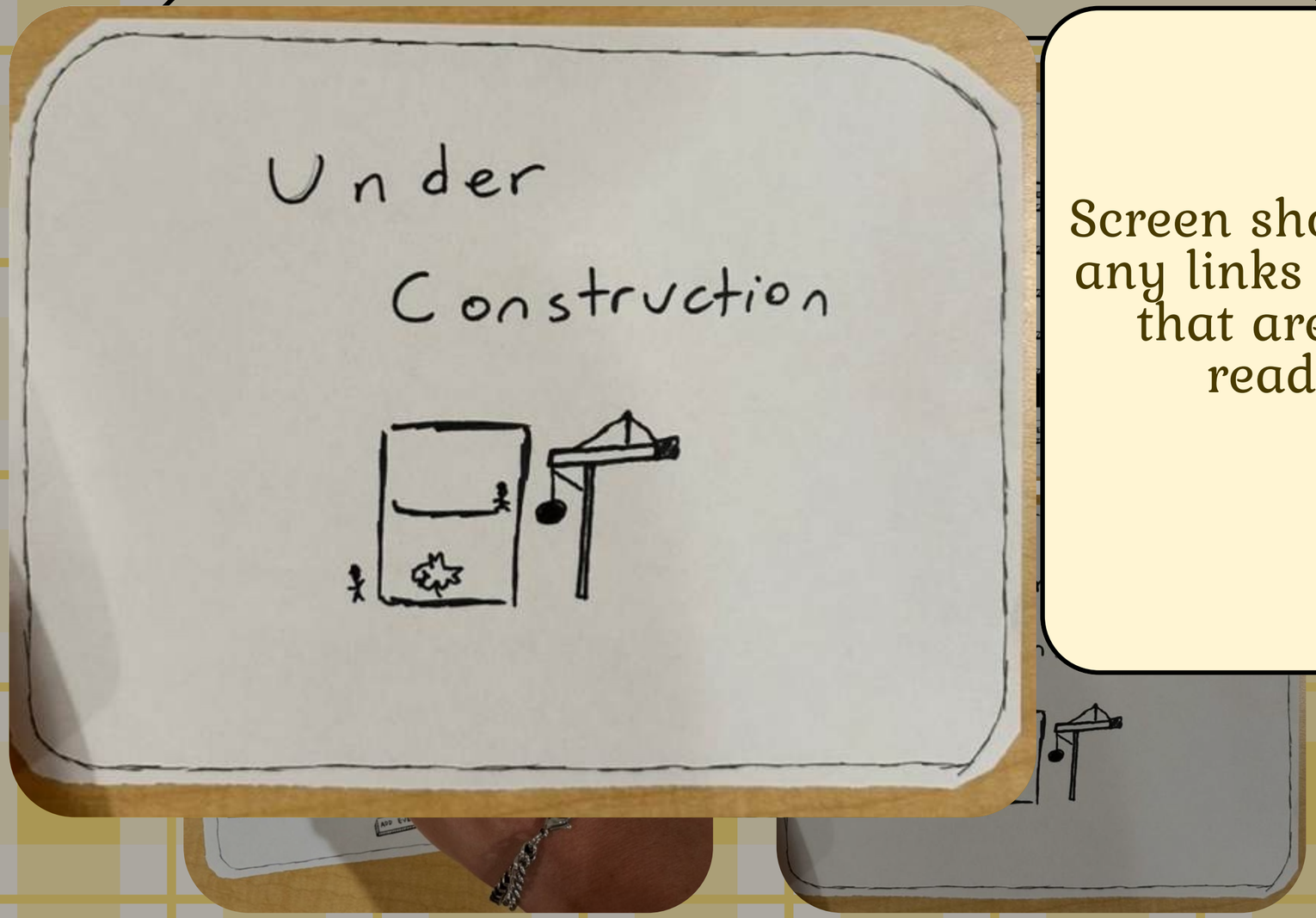
Scrolling
Exhibit B.

SCREENS



Finished scrolling to next month's calendar. Can now see December's events.

SCREENS

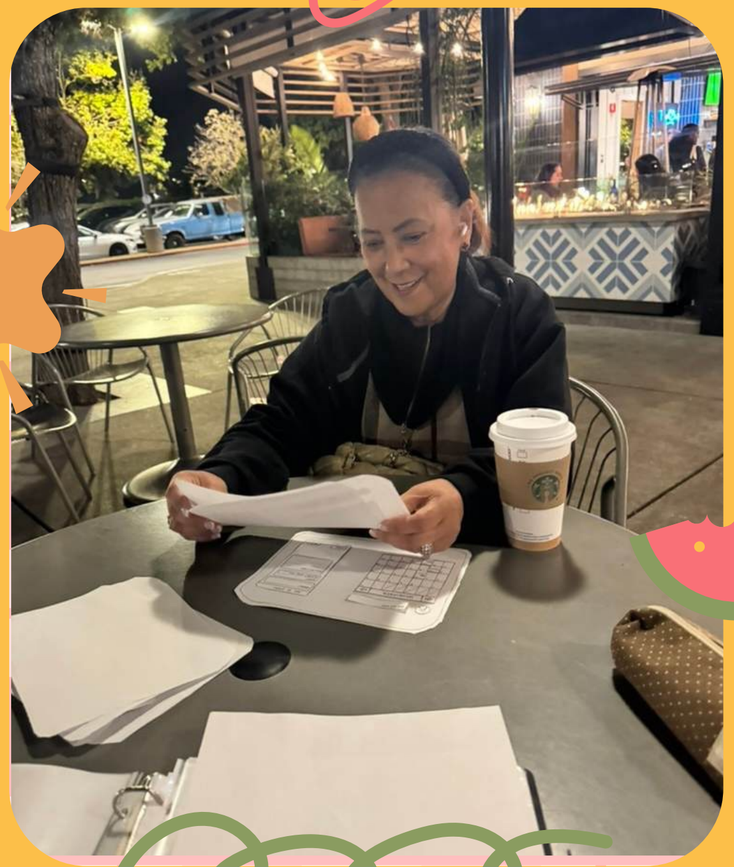


Screen shown for any links clicked that are not ready.

TESTING METHODOLOGY

PARTICIPANT 1: VALERIE*

Demographics: age 65+, female, part Irish and Vietnamese, fluent in English
Recruitment: cold outreach on street, verbal screening questionnaire
Compensation: none
Environment: in-person; natural setting (outside in public mall)
Apparatus: lofi prototype



*Name changed for anonymity.

PARTICIPANT 2: BELLA*

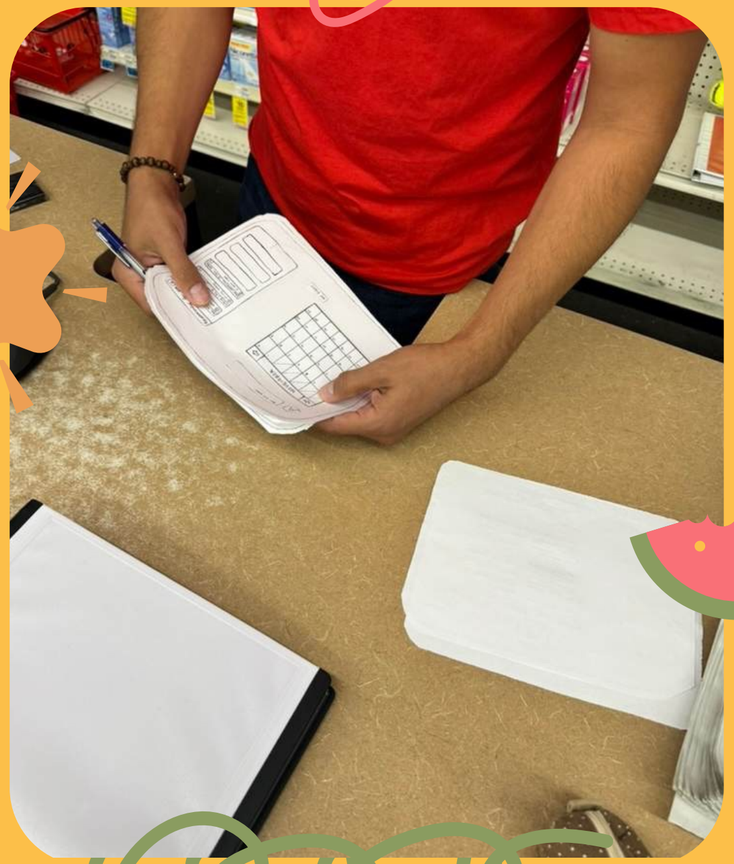
Demographics: age 55+, female, German, fluent in English
Recruitment: cold outreach on street, verbal screening questionnaire
Compensation: none
Environment: in-person; natural setting (outside in public mall)
Apparatus: lofi prototype

*Name changed for anonymity.

PARTICIPANT 3: FINN*

Demographics: age 50+, male, half Argentinian and Bolivian, fluent in English
Recruitment: cold outreach on street, verbal screening questionnaire
Compensation: none
Environment: in-person; natural setting; inside store (CVS)
Apparatus: lofi prototype

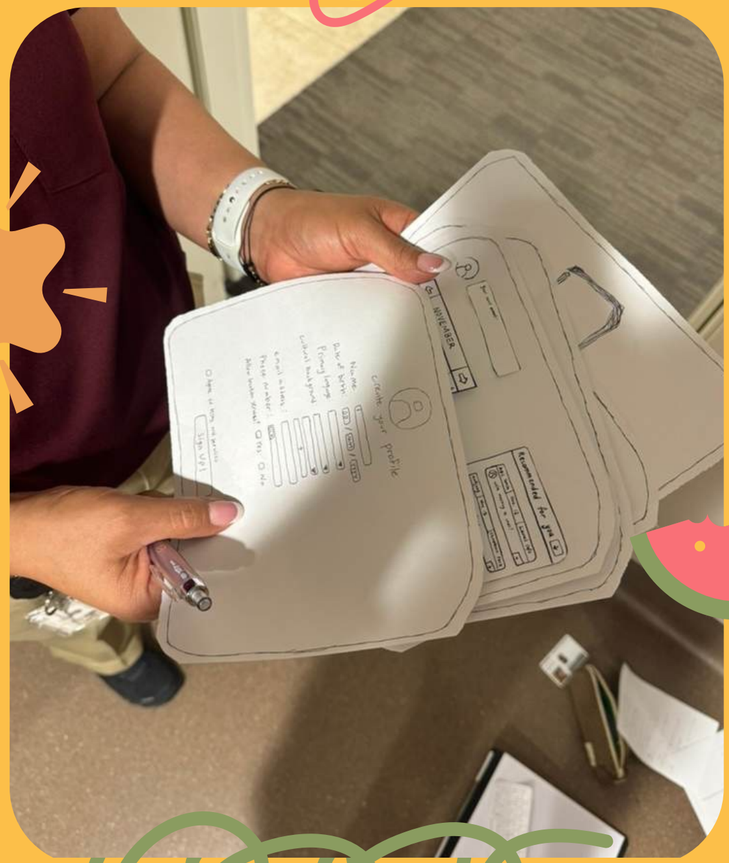
*Name changed for anonymity.



PARTICIPANT 4: MADDY*

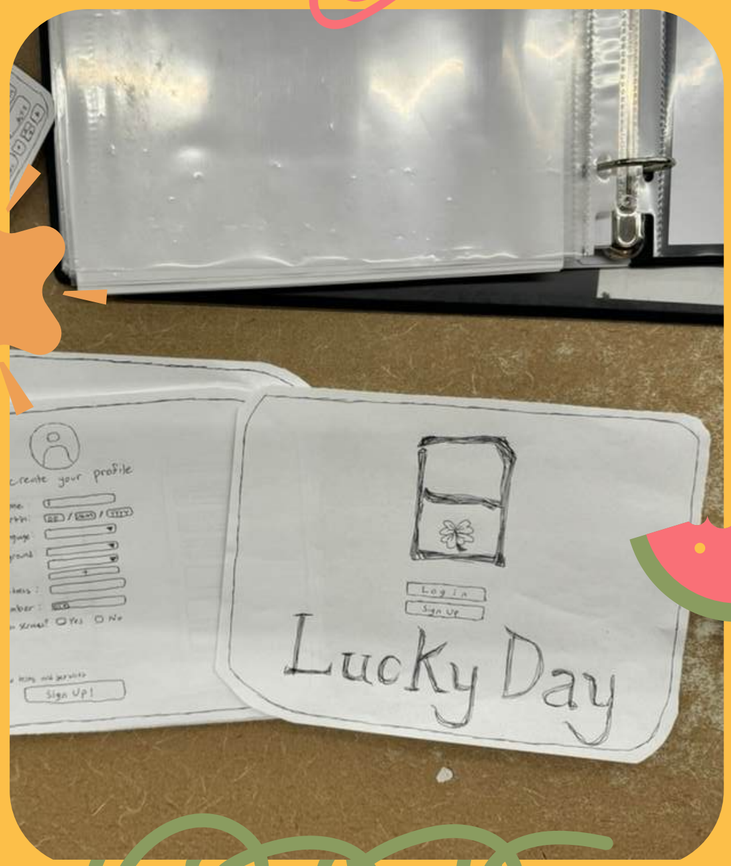
Demographics: age 60+, female, primary language Spanish (not fluent in English)
Recruitment: cold outreach, verbal screening questionnaire
Compensation: none
Environment: in-person; natural setting; at Stanford (EVGR)
Apparatus: lofi prototype

*Name changed for anonymity.



PARTICIPANT 5: TAY*

Demographics: age 65+, male, Japanese, semi-fluent in English
Recruitment: cold outreach on street, verbal screening questionnaire
Compensation: none
Environment: in-person; natural setting; inside store (CVS)
Apparatus: lofi prototype



*Name changed for anonymity.

TEAM ROLES

01

Facilitator

Screening questions; explains gist of app; walks user through each task.

02

Note-taker

Transcribes interactions and dialogue; records any feedback given by user.

03

Computer/iPad

Moves pieces around; changes user's screens.

04

Data Collector

Sets a stopwatch to measure how long it takes to complete all tasks. (Can also count how many steps taken to complete each task.)

TEAM ROLES

01

Facilitator
Round 1: Lianne
Round 2: Clare
Round 3: Ethan
Round 4: Em

02

Note-taker
Round 1: Clare
Round 2: Ethan
Round 3: Em
Round 4: Lianne

03

Computer/iPad
Round 1: Ethan
Round 2: Em
Round 3: Lianne
Round 4: Clare

04

Data Collector
Round 1: Em
Round 2: Lianne
Round 3: Clare
Round 4: Ethan

PROCEDURE

01

Pre-screening/Consent

Begin by asking pre-screening questions (follow script). If participant matches target user profile, provide consent form to sign.

02

Project Background

Give brief introduction to team and overview of the project/app (according to the script). Outline the three main features that will be tested.

03

Test Features

Go through screen by screen and have the user test the features on the lofi prototype.

04

Ask for Feedback

Finish by asking for any feedback on design or the user experience and thank them for their time.

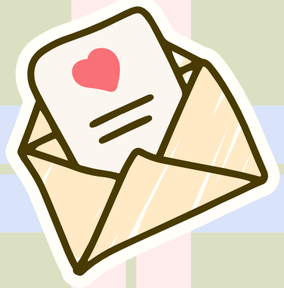
USABILITY GOALS

1. User can easily navigate between the different sections (calendar view to panel view).
2. The text and icon sizes are easily readable for users with varying vision abilities.
3. Users can easily recover from mistakes (e.g. press back button).
4. Users can complete all three key tasks in a minimal number of steps and amount of time.

KEY METRICS

- Number of participants who successfully completed all tasks.
- Number of times user asks to go back to a previous screen.
- Amount of time taken for user to complete all tasks.
- Number of times user stops to ask questions.

TESTING RESULTS



PROCESS DATA

1. Engagement: All users were extremely engaged and excited to test out our prototype. They readily gave feedback at the end and wholeheartedly participated.
2. Timing: Surprisingly, the screen that took the longest time was the sign-up and profile creation.
3. Design: Users appreciated the landscape layout of the app and found all features were easy to navigate since they are on one screen.

BOTTOM-LINE DATA

Goal 1: Users can easily navigate between different sections of the app.

According to our post-testing verbal feedback survey, all four participants found the app easy to navigate with intuitive features.

BOTTOM-LINE DATA

Goal 2: The text and icon sizes are easily readable for users with varying vision abilities.

According to our post-testing verbal feedback survey, two of four participants wished the text was larger. There were no comments about changing the icon sizes.

BOTTOM-LINE DATA

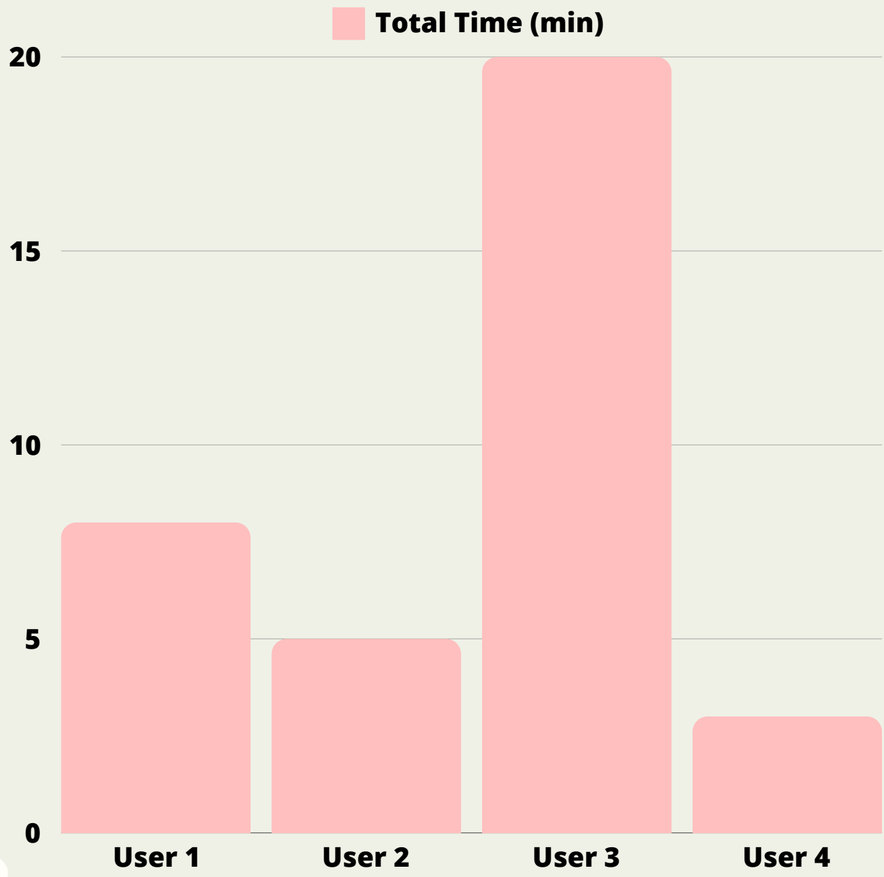
Goal 3: Users can easily recover from mistakes (e.g. press back button).

None of our four participants made any mistakes in completing the tasks. We provided a back and cancel button in the event of a mistake, but neither were used during testing.

BOTTOM-LINE DATA

Goal 4: Users can complete all three key tasks in a minimal number of steps and amount of time.

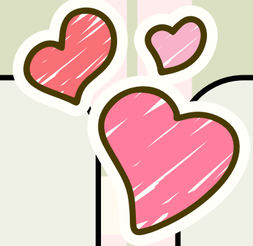
*User 3 was on shift and pre-occupied during our testing, leading to an outlying high data point.



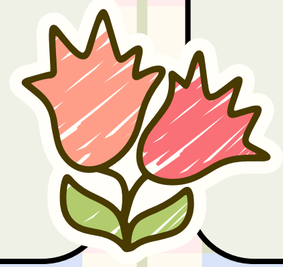
ADDITIONAL OBSERVATIONS

- “Cultural background” can be confusing for users, especially if they identify with multiple countries and cultures.
- For those hosting events, would like to have a funding/pooling option to pay for venues and other costs.

ADDITIONAL OBSERVATIONS



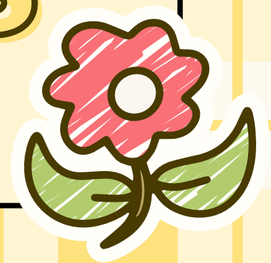
- Front logo was pressed like a button (is not actually a button) on the login/sign-up page.
- Would like to invite friends to events and wonders how to message people on app.
- Users either hold iPad up in the air to read screen or put it down on table to type.



HOW DID WE DO?

Overall, our lofi prototype was a success since all four participants completed all tasks. Users found it intuitive to use and understood the different parts of the screen. When in an undistracted environment, the tasks took a reasonable time to complete. No major mistakes were made. Some text was hard to read, so we will enlarge all text on the app.

IMPLICATIONS



IMPLICATIONS

The fact that all participants completed the tasks without major mistakes indicates that the interface design is user-friendly and intuitive. This suggests that future iterations should maintain this simplicity to ensure a positive user experience.

IMPLICATIONS

The users' ability to understand different parts of the screen highlights the effectiveness of the current layout and visual hierarchy. Any new features or elements introduced should align with this intuitive understanding to avoid confusion.

IMPLICATIONS

The user's environment factors into the usability of the app. If the user is in a distracted environment, they may find it difficult to handle the features of the app. We can have the app automatically save any progress and send gentle reminders to remind the user they have an ongoing task/event to finish adding/creating.

FEEDBACK

- “It’s hard to read some text.”
- “‘Cultural background’ on sign-up page is confusing.”
- “What if I don’t want location services on?”
- “The calendar takes up a lot of space when I can see the event on the panel without the whole calendar.”

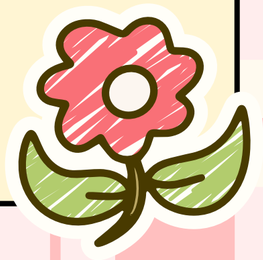
CHANGES

- Enlarge font on all text.
- Allow user to choose as many cultures as wanted.
- Create option to manually put in address/location.
- Potentially consider shrinking the calendar when using side panel.

TESTING LIMITATIONS

- Did not reveal how people react when users make mistakes.
- Did not a to manage the cold start problem (especially for users who are interested in more uncommon cultures in their area)

APPENDIX



FULL LIST OF PROS/CONS

RING PROJECTOR

PRO

- Straightforward and serves a single purpose, making it easy to learn and use.
- Helps seniors avoid getting lost by providing simple, step-by-step directions.
- Especially helpful for those who can't read signs in English.
- Location-based design that facilitates finding events in a physical space
- Location services for seniors to navigate streets and for caretakers to track them
- Allows seniors to navigate even in newer locations, familiarize them with routes they aren't already used to so they can attend new events

CON

- Not enough information for joining, posting, or searching for events.
- Would function better as an extension to existing infrastructure rather than a standalone device.
- Device too small for seniors to read directions.
- UI difficult to navigate and construct
- Intimidating technology- ring wearable too newfound for older adults
- Accessibility and relevancy- not many seniors use wearables / affordability
- Prone to damage or loss due to size and wear
- Single-function device would not be popular
- Difficult to wear for seniors with rheumatoid and vascular conditions

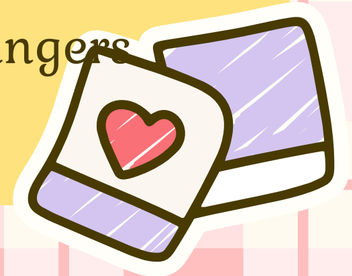
IPAD APP

PRO

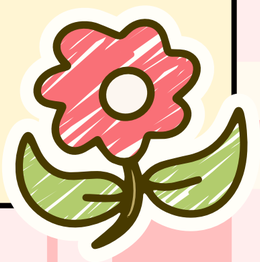
- Can use while propped up on a stand or in a case (comfortable for at home use).
- Easier for typing; less frustrating than small keyboard on phone.
- Large surface allows for more features on the screen and larger text (easier to see).
- Relevancy- seniors utilise iPads for ease of use over mobile devices
- Universal popularity of iPads/tablets amongst seniors

CON

- Bulkier and less convenient to carry around an iPad.
- Potentially no access to data while in transit, which could be crucial for last-minute updates or changes to events.
- Less hands-free usage; needs more user interaction.
- Accessibility- not all have the ability to afford iPad
- Requires more tech literacy
- On-the-go usage may cause dangers for seniors (lower situational awareness during usage)



SCRIPTS



SCREENING QUESTIONNAIRE

Questions asked:

1. Age?
2. Gender?
3. Cultural background?
4. Familiarity with technology?
5. Use of tablet?

Participant Screening Questionnaire

1. Age
   a. 50-55
   b. 55-60
   c. 60-65
   d. 65+
2. Gender
   a. Female
   b. Male
   c. Non-binary
   d. Prefer not to say
3. Cultural background (i.e. what is your ethnicity)
4. How comfortable are you with using technology?
   a. Not at all (have never used smartphone/tablet before)
   b. Somewhat comfortable (occasionally use phone and tablet, but not all of their features)
   c. Very comfortable (use it all the time)
5. Have you used a tablet before?

If the participant answers that they are at least somewhat comfortable and have used a tablet before, we will proceed to ask if they are comfortable being a participant in our user study and give them a consent form.

If the participant answers that they are at least somewhat comfortable and have used a tablet before, we will proceed to ask if they are comfortable being a participant in our user study and give them a consent form.

DEMO SCRIPT

Hi, my name is ___. I'm a student at Stanford working on a project to design a social event calendar app for seniors. Do you have 5-10 minutes to help test out our initial prototype?

Thanks so much for helping out! I would love to get to know you a bit better before starting, do you mind if I ask a few preliminary questions? You don't have to answer anything you aren't comfortable with.

First, can I get your name?

So nice to meet you, ___! Since we're running a product for seniors, do you mind telling me how old you are or what age range you're in?

Our app also has special features regarding selecting what cultural events you might be interested in. I'd love to know where you're from and what your cultural background is.

Just a couple last questions... how comfortable are you with technology and have you used an iPad or some sort of tablet before?

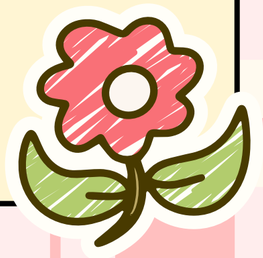
(If they answer "no," can try to compare usage to a smartphone, but otherwise it might be a bit difficult to continue. Can just say "thank you for your time and chatting with me.")

Great! Glad to hear that you're already familiar with using tablets. Before we begin testing, do you mind filling out this consent form? It outlines what kind of data we might collect and what it'll be used for. In today's testing experience, we won't be audio recording or video recording, but we might take some pictures and will be taking notes if you are comfortable with that.

Thank you for signing the consent form! As a quick overview of what we'll be doing today, we've created a mock up of our app on paper to test its most important features and see if they're intuitive for the user. The app will be a social calendar for seniors with language support and culturally-tailored activities, enabling seniors to easily discover, join, and organize events that resonate with their cultural background. The three features we will have you test are (0) signing up from the main page, (1) viewing and adding events to your calendar, (2) swiping through to the following month and tapping on a new day to pull up more recommended events and then adding a non-cultural event, and (3) creating and publishing your own event with the right tags.

(At this point, hand over the prototype and see if they can figure it out. Give them reminders what task they are completing and explain the next one after they finish each task.)

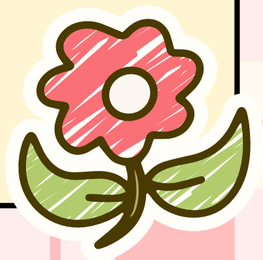
LOG OF CRITICAL EVENTS

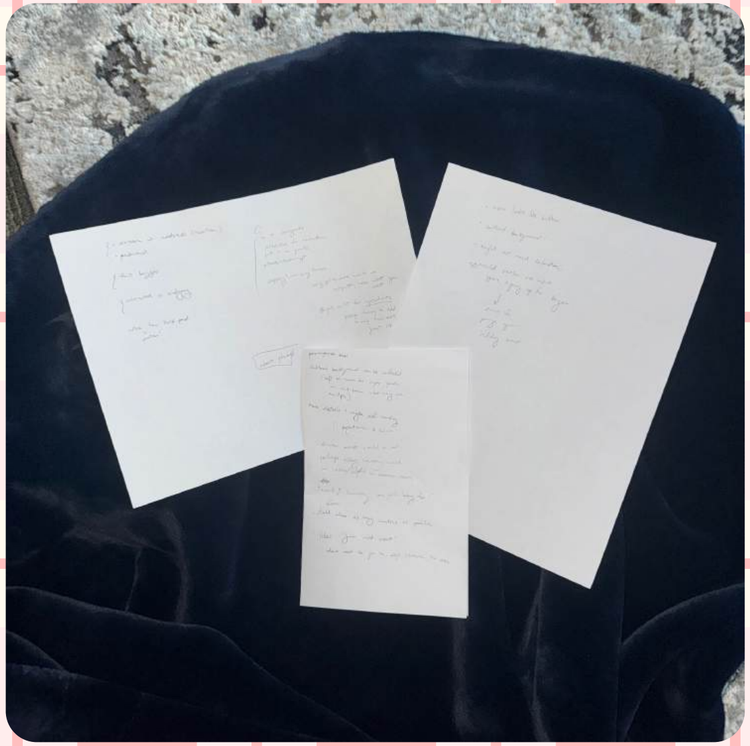


CRITICAL EVENTS

(2) “I’d rather see what I’m signing up for than the big calendar on most screens.” (Bella)
(2) “I’m Argentinian and Bolivian and I’d want to go to both kinds of events if I can select multiple cultures.” (Finn)
(1) “I want to go shopping and invite friends over to cook. Can there be a feature to add money to help fund the event?” (Valerie)
(0) “I really like the ‘your next event’ pop up so that I don’t have to go to a separate screen to see it.” (Finn)
(0) “I wanna play mahjong! Do you play mahjong?” (Valerie)

ADDITIONAL FIGURES





Feedback notes from testing. (Summarized in slides.)

Time-keeping for participant 1 during testing to complete all tasks.

Very nice GT3RS we saw on the street while scouting for old people.