LO-FI

Cultured Cardinals

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CircLing

A way to preserve, keep track of, and share your language using your day-to-day conversations with your family & friends circle.

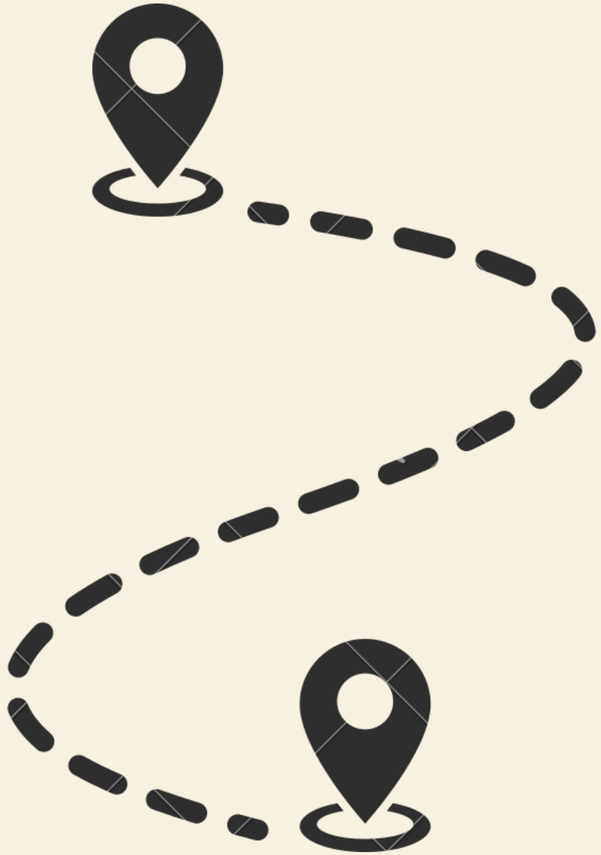
Problem & Solution Overview

After meeting a Latina cashier at EVGR, we identified the problem that many first- / second-generation people mostly **maintain** their native language **via older** family members.

Our solution is to eternalize that **language connection** between the user and their family & friends via their ‘language footprint’ made of **texts and calls**, and provide **data insight** on each user’s language use, thereby assisting the user to **preserve** their multilingualism.

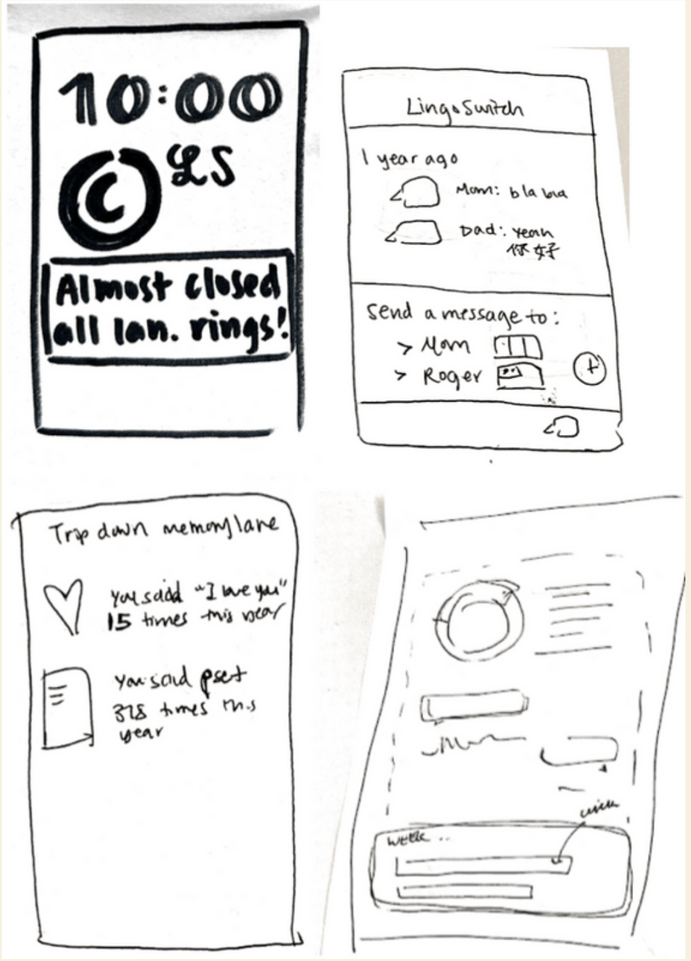
Outline

- Sketching Exploration
- Deeper Dive into Mobile and XR
- Lo-Fi Prototype & Task Flows
- Testing
- Results and Discussion

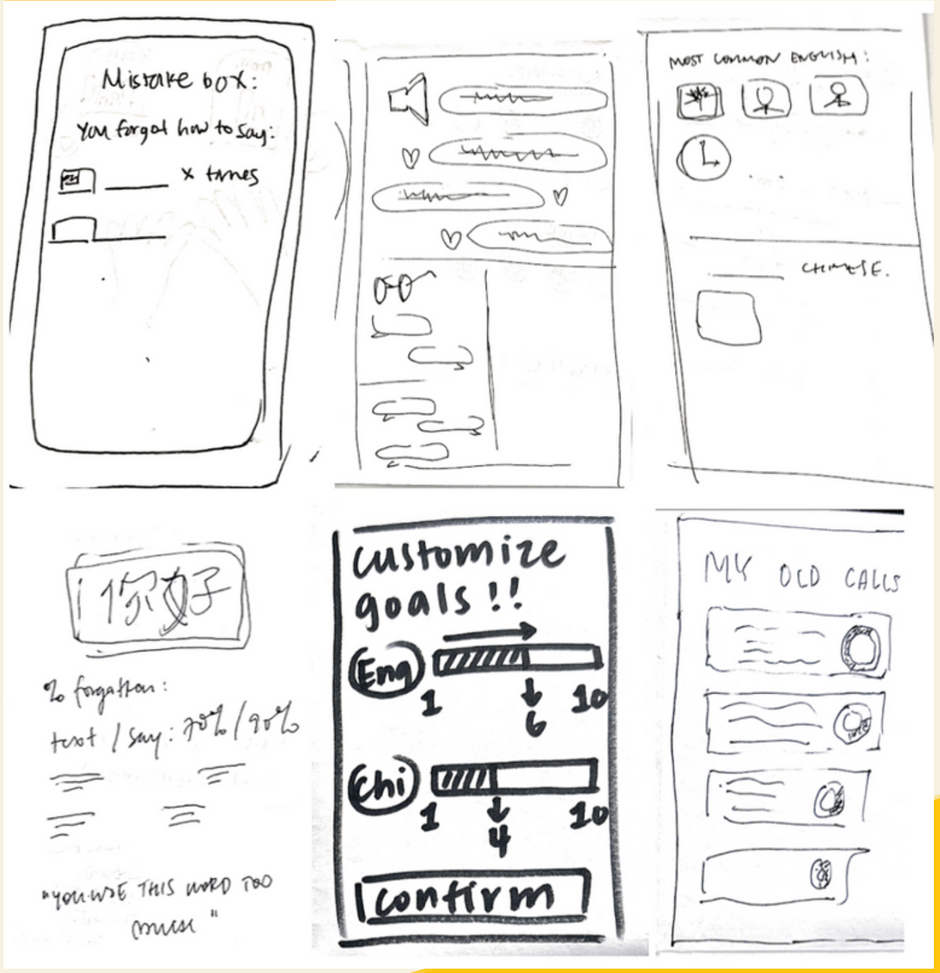


Sketching explorations

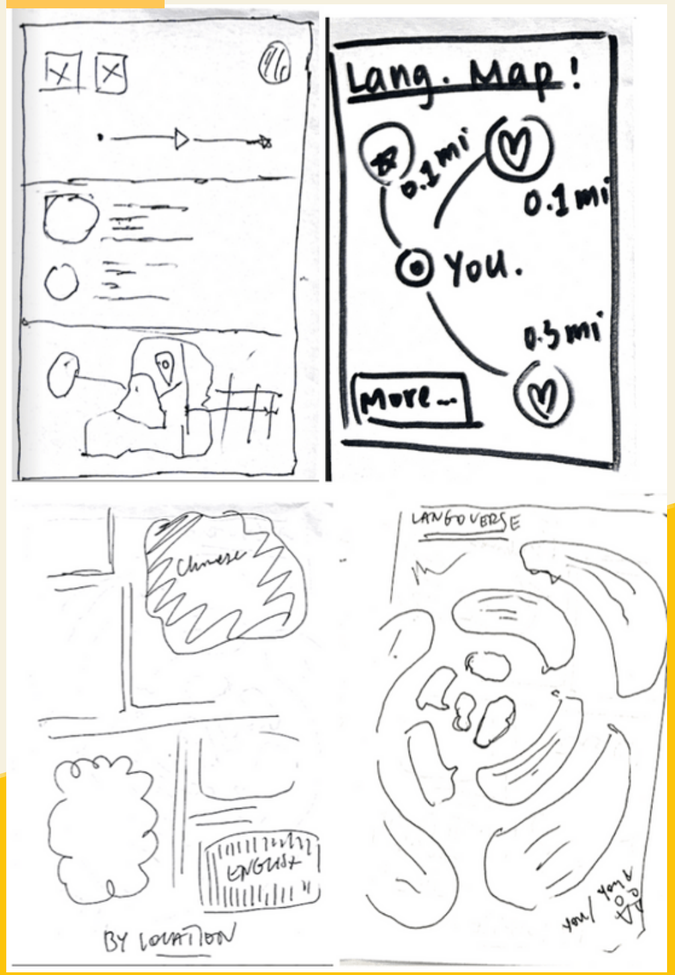
Notification-based



Mobile UI

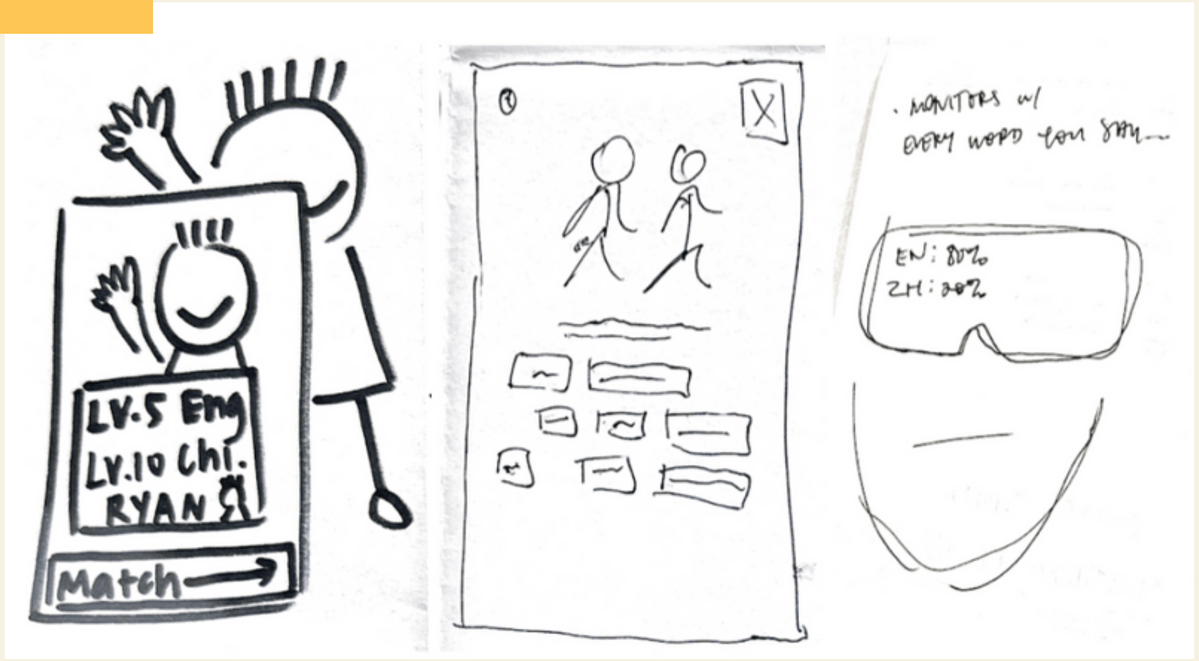


VR

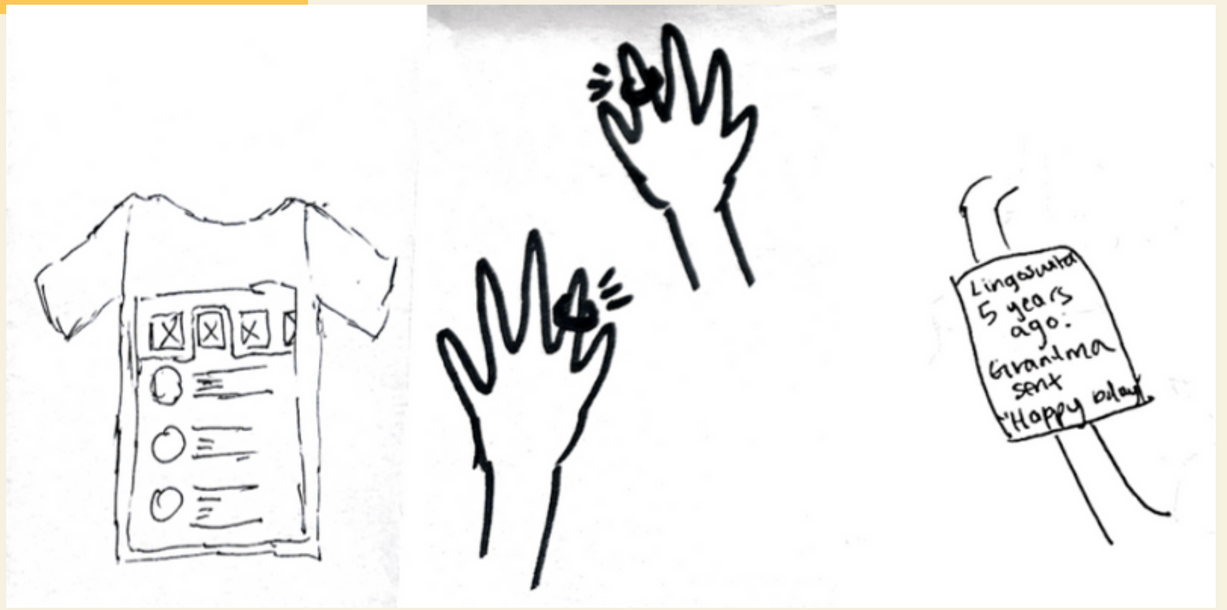


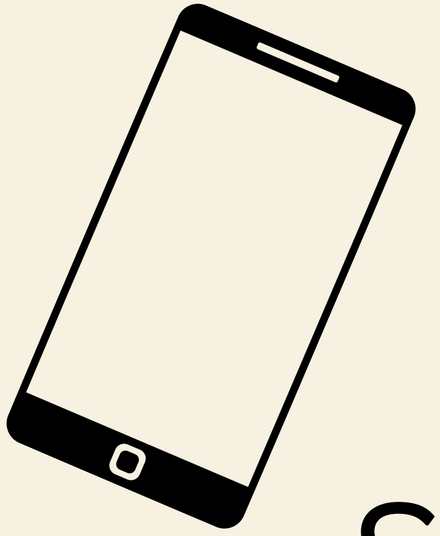
Sketching explorations

AR

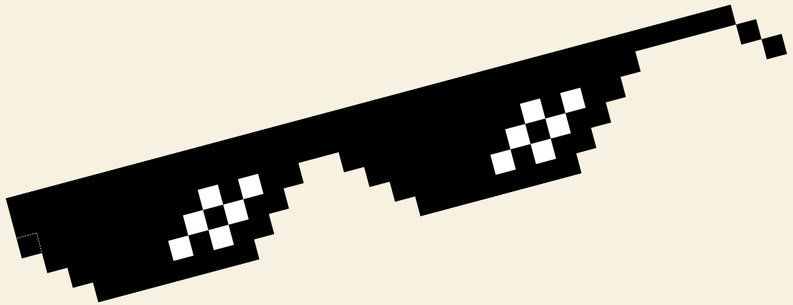


Wearable

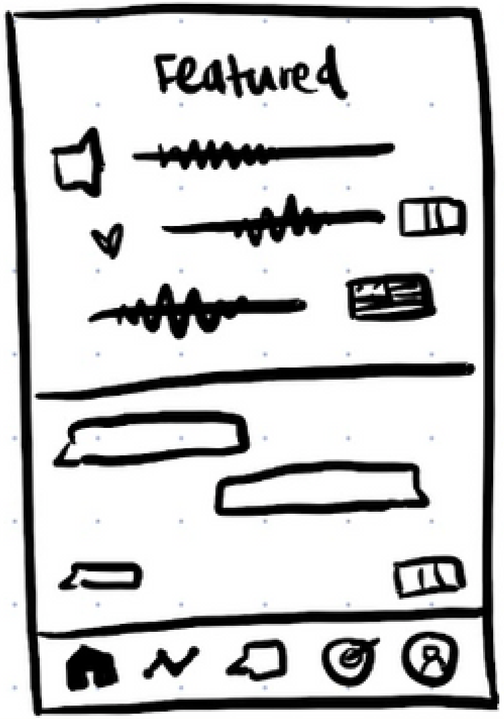


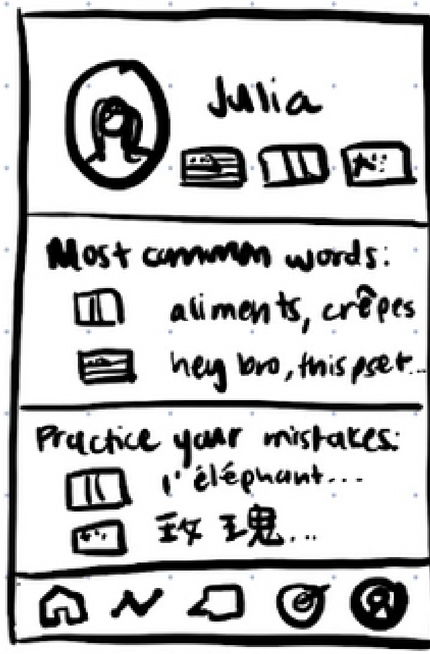


Selected Realizations: Mobile and XR (AR+VR)



Mobile: Key Sketches





Mobile: Discussion

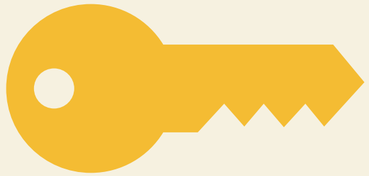
Pros

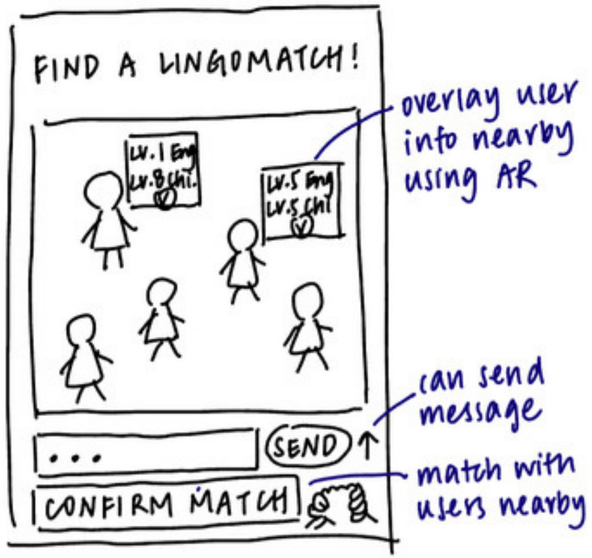
- Intuitive - users have existing mental models
- More accessible

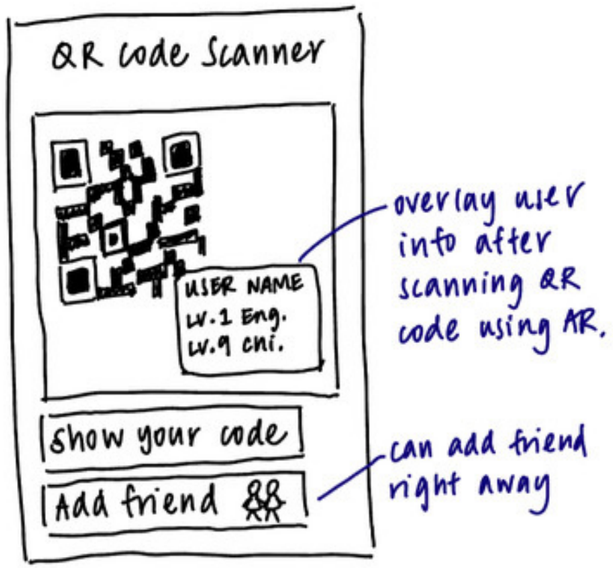
Cons

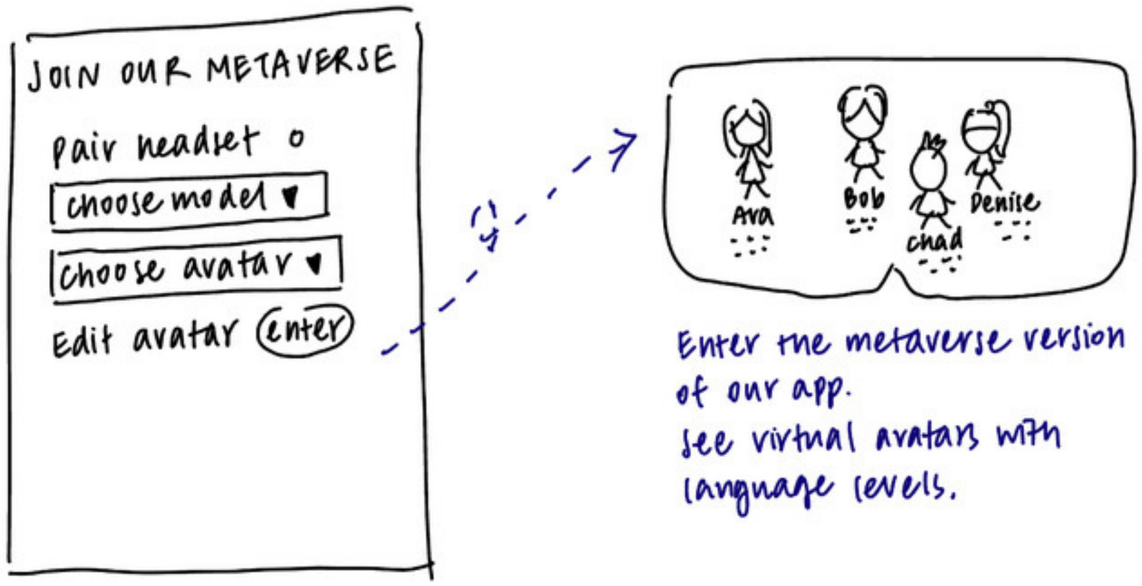
- Overdone
- Not immersive / ubiquitous
- Screen real estate limited

XR: Key Sketches









XR: Discussion

Pros

- VR: can decrease the fear and pressure of having to interact with a person in real life.
- AR: UI that includes both people in real life and additional info via virtual overlaying.

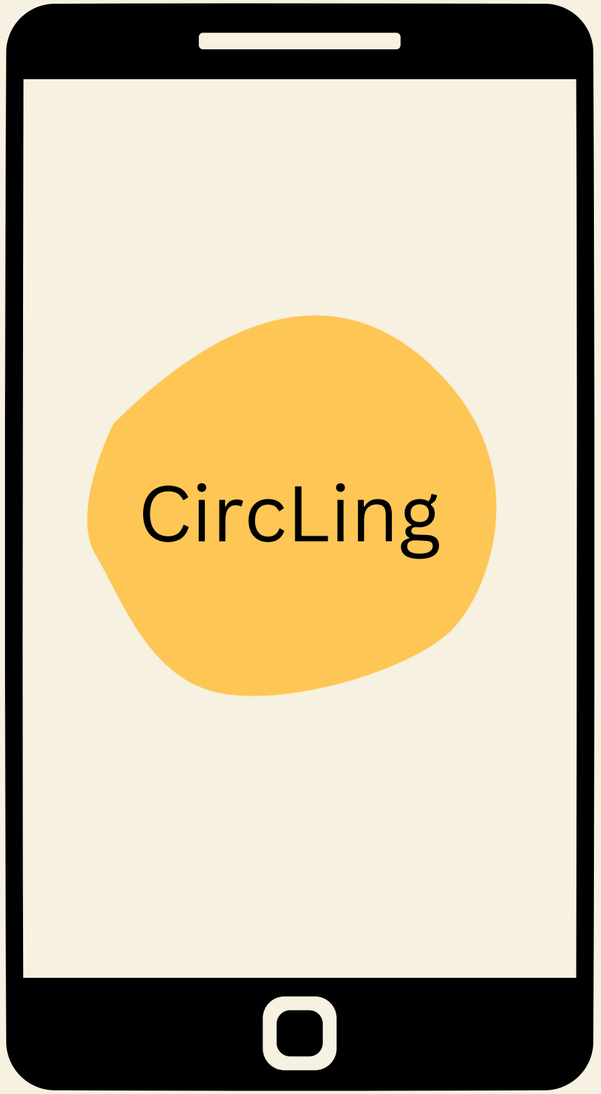
Cons

- VR: requires additional hardware (headset).
- AR: might make others uncomfortable if phone points at them.

Why Mobile?

XR advantages not leveraged
App functions use **2D** data (graphs and text) both of which don't leverage the full capabilities of XR.

Flexibility - an app that users can use anywhere without really needing to be in a certain situation.



LO-FI Prototype

Construction

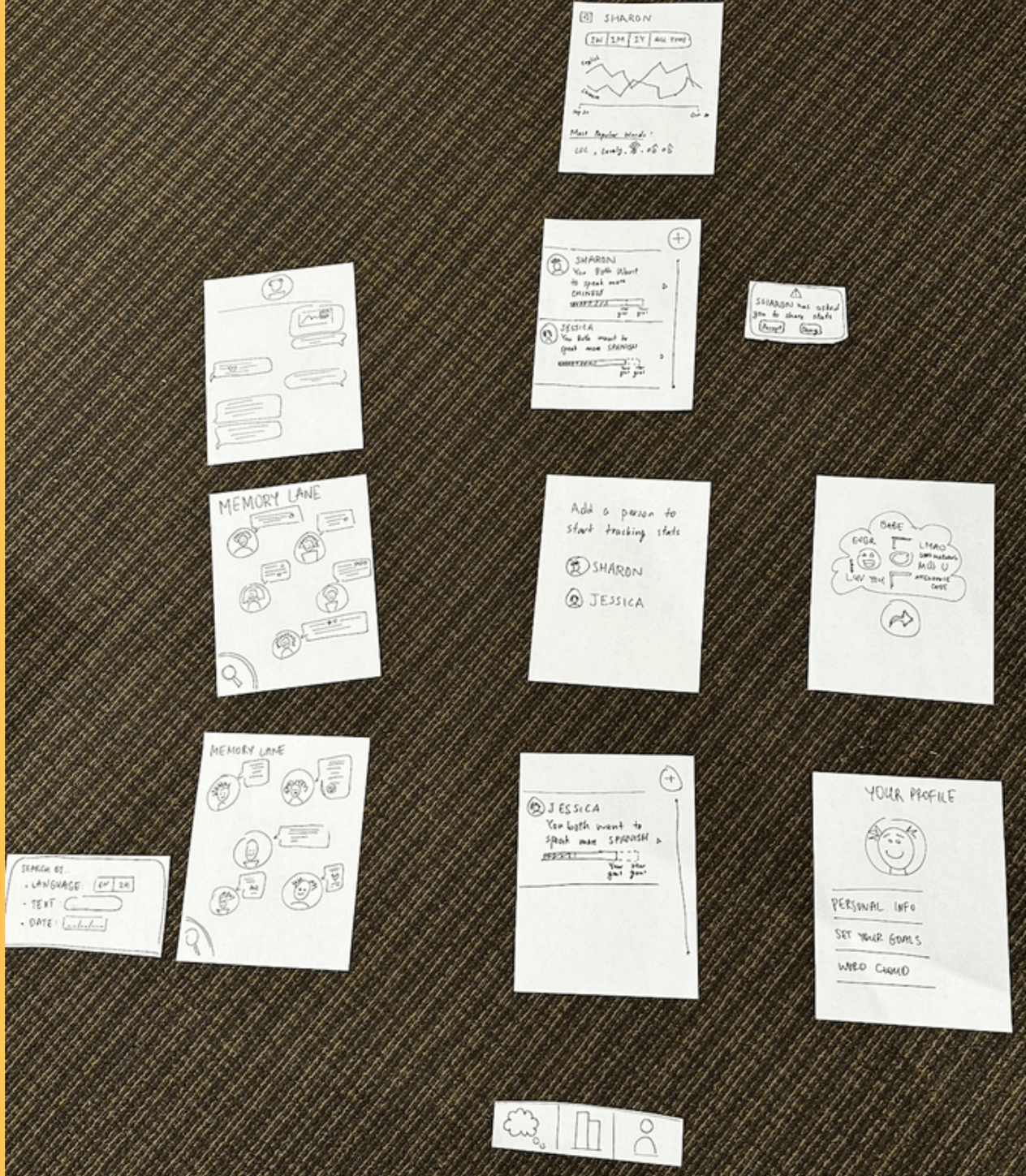
Features:

- Fixed bottom navigation bar
- Collection of screens for each tab
- Popups that we cut out and interjected

Gestures:

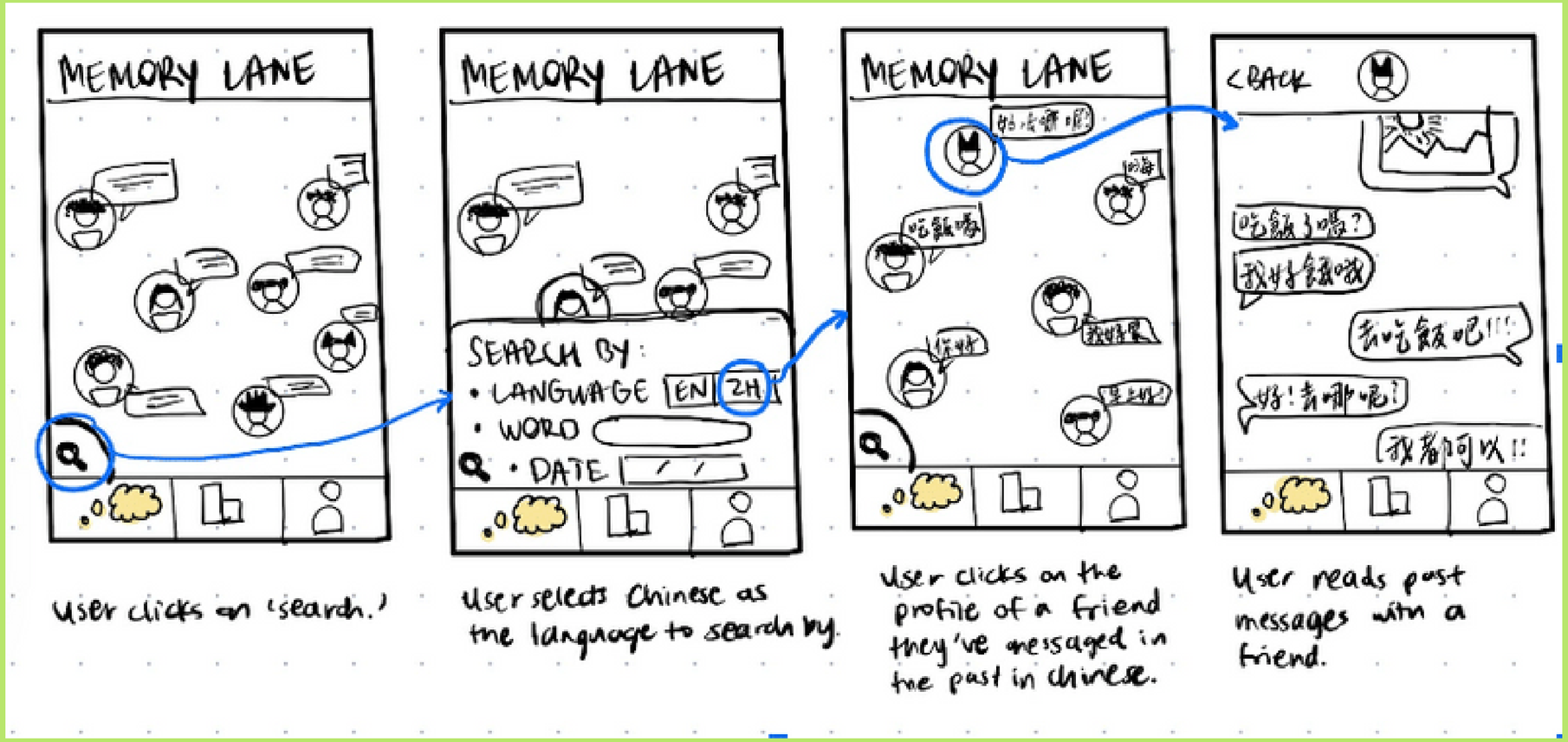
- Only taps

Built only out of paper, operated with hands.



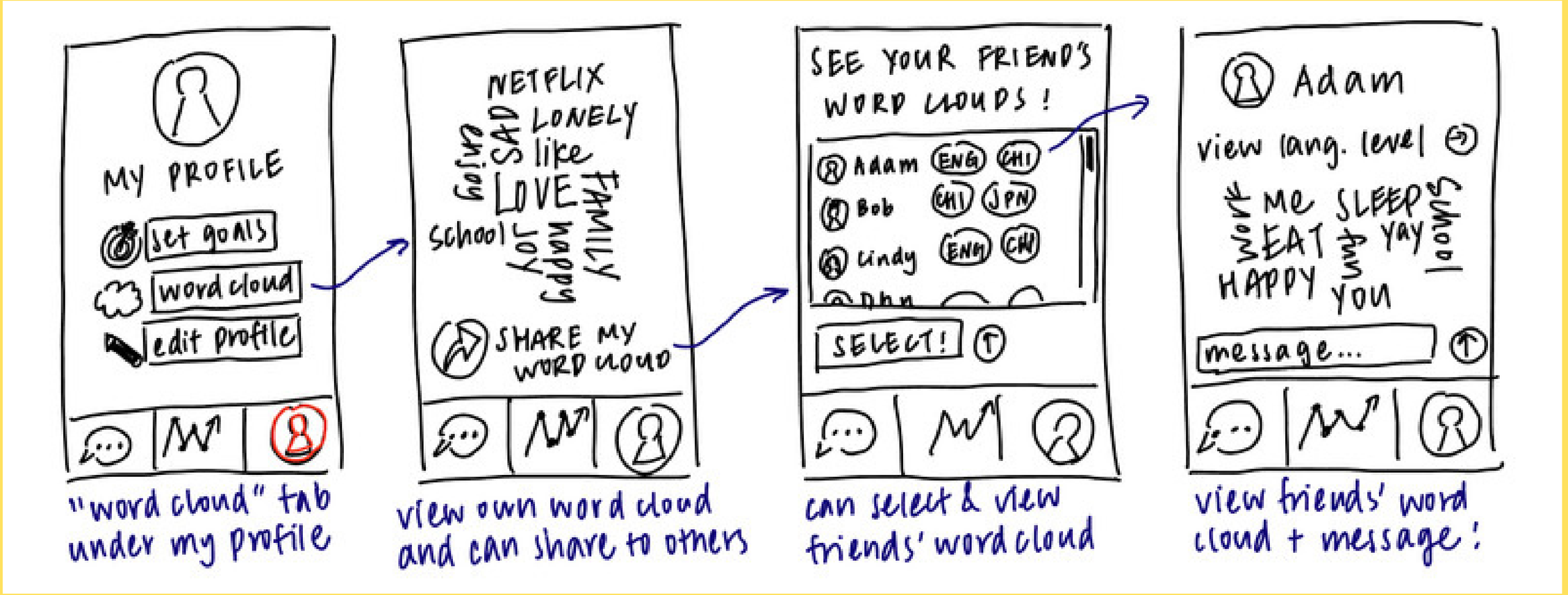
Task-Flow: Simple

View a random text memory in Chinese.



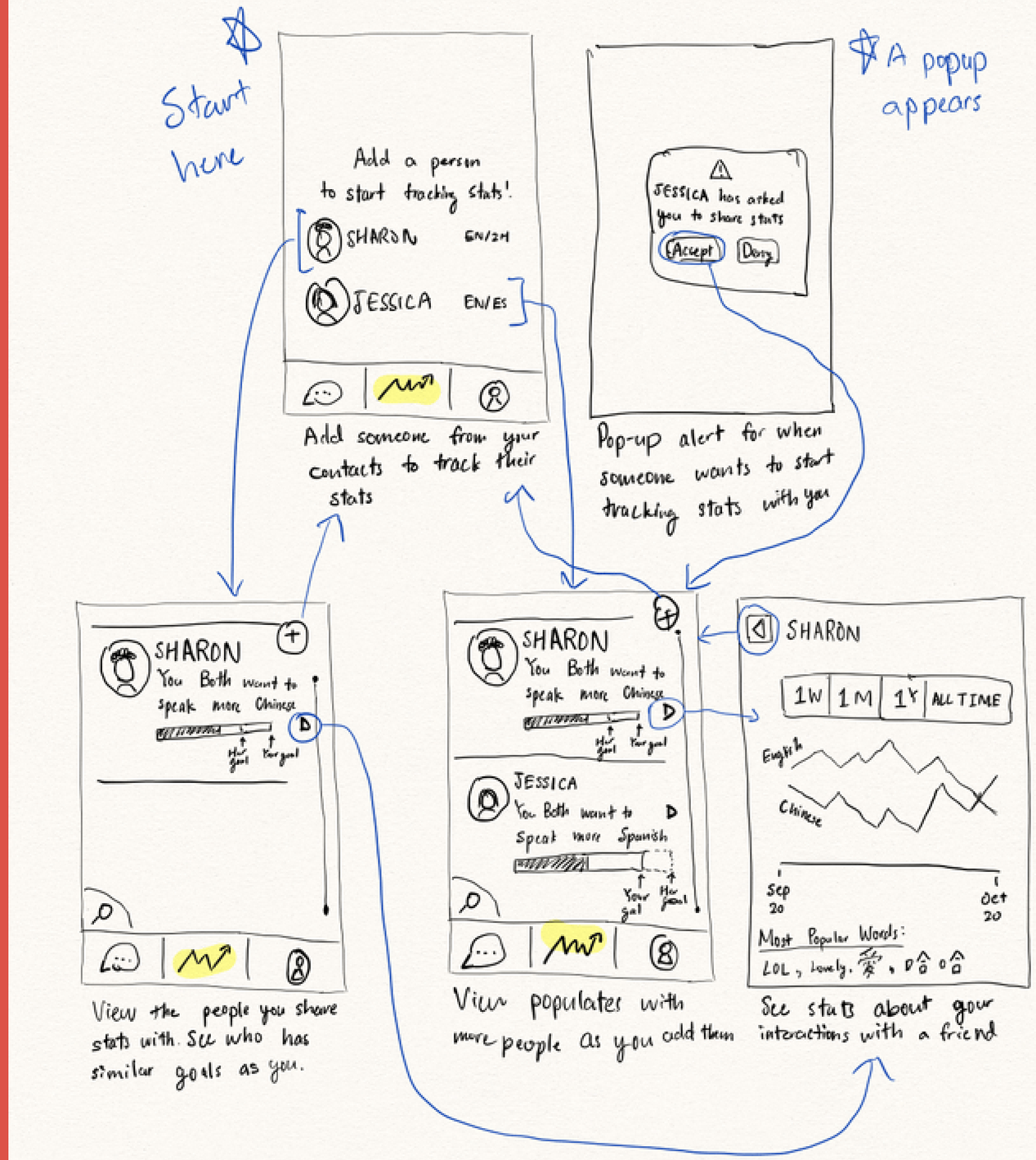
Task-Flow: Medium

Share your Word Cloud with a friend.



Task-Flow: Complex

Add a Chinese-speaking friend to the app and view your joint language-use statistics.



Testing

Participants

Found near Main Quad on Wednesday and Thursday!
Compensated with Snickers.

I-Jun

- 33 y.o.
- Teacher
- English, Korean

Daniel

- 24 y.o.
- Civil Engineer
- English, Spanish

Kuo

- 23 y.o.
- Software Engineer
- English, Chinese

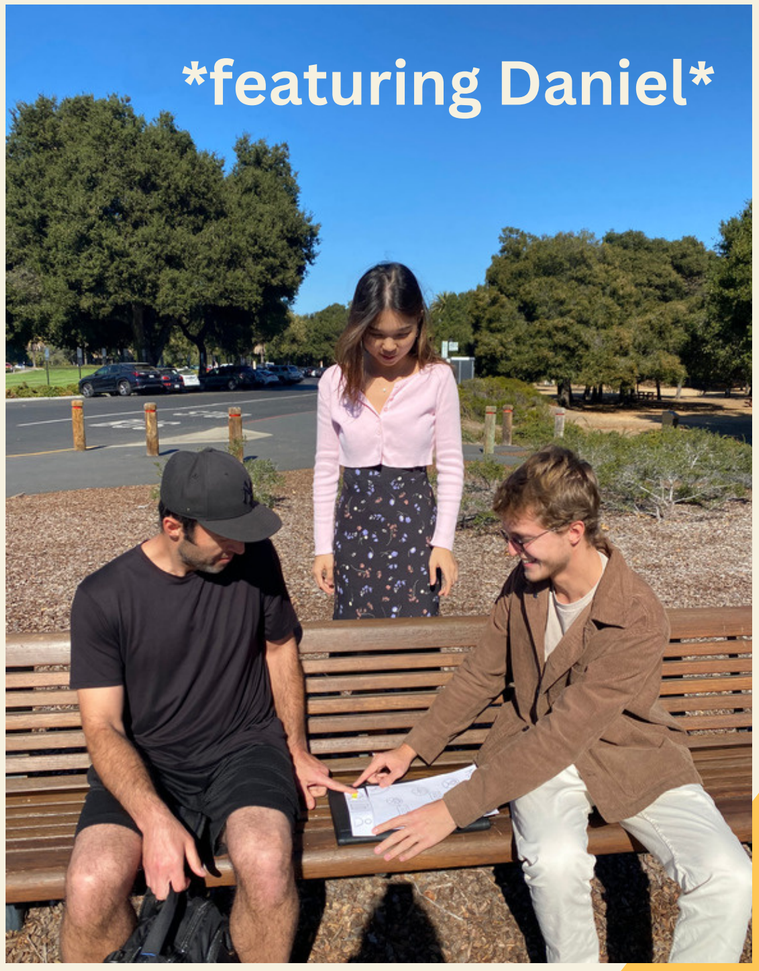
Jamie

- 26 y.o.
- Entrepreneur
- English, Korean, Chinese

Steven

- 23 y.o.
- Student
- English, Chinese, Spanish

Testing Environment



Roles

Greeter

Observer

Facilitator

Computer

Procedure

*** script in appendix*

- Introduction
- Background Info on App
- Demograpahic Questions
  - Age
  - Relationship with technology
  - Call vs. text %
  - Languages used
    - Few follow-up questions
- Task Introduction
  - Task 1- Simple
  - Task 2 - Medium
  - Task 3 - Complex
- General Feedback
- Candy

Usability & Measurements

- **Fun**
  - Number of times user has a positive emotion.
- **Efficient**
  - Time spent per task.

Results

Big Picture

Task Difficulty as Perceived by Users:

Easiest →→→ Simple → Complex → Medium →→→**Hardest**

Flaws of the Design: the Medium Task confusion

4 users messed up at first:

- **3** users mistook the Memory icon for the cloud *despite* having completed the first task.
- **4** users navigated to Stats icons.

Only **1** user completed this task seamlessly.

Flaws of the Prototype

- **3** users were unsure what language the displayed texts were in.

Positive Reviews

- Users were enthusiastic about the idea.
- Complex Task was not perceived as very difficult.

Baseline: by Task

	Simple	Medium	Complex
Mean time:	0.718 min	1.782 min	1.4 min
SD time:	0.163	0.543	0.339
Num pos emotions:	5	2	3

Discussion

Key Takeaways

Users are confused by current IA.
Icon selection is of utmost importance.
Every user has their own mental model based on other apps.
Users like app flexibility.

Design Changes

Re-think Information Architecture (potentially with a card-sorting study).
Review designs of other common apps.
Add >1 path to perform the same task.

What Testing Couldn't Reveal...

How quickly does the user learn the app? Paper was very unnatural, Figma would be a lot better.

What is the most useful feature?

How much value will this app actually bring?

Appendix

https://docs.google.com/document/d/14iIKVnU6mZo4MC7sSH-CkyzBSOSmYCPK5OYOLEoh3Ig/edit