

Studio:
Unintentional Good

A5: SKETCHING, LOW-FI PROTOTYPING & PILOT USABILITY TESTING

What's Inside

01 Intro

02 Sketching Explorations

03 Selected Interface

04 Low-Fi Prototype

05 Testing Methodology

06 Testing Results

07 Observations & Implications

08 Appendix



01

Intro

The Team



Emily Deng

Symbolic Systems '25



Jenna Kim

Computer Science '25



Ariane Lee

Computer Science '25

Problem

People find it difficult to find services that suit their personal needs, and online reviews from strangers are often unhelpful with the search.

Solution

A **service** recommendation app where you can **see and request** recommendations from **friends & friends of friends** for things like plumbers, mechanics, nannies, etc.

Solution

A **service** recommendation app where you can **see and request** recommendations from **friends & friends of friends** for things like plumbers, mechanics, nannies, etc.

Removes clutter of other categories and focuses on addressing needs

Can explicitly solicit recommendations instead of just relying on existing content

Can get trusted recommendations from a network that extends beyond just direct connections

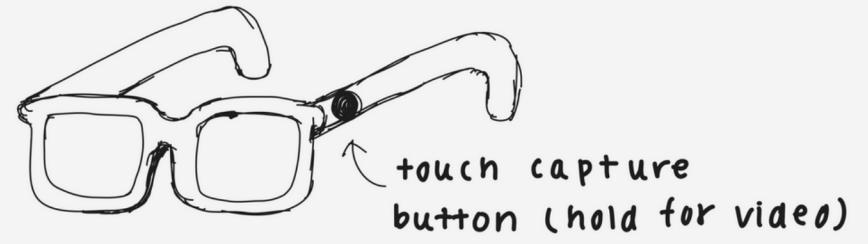


02

Sketching Explorations

Sketching Explorations

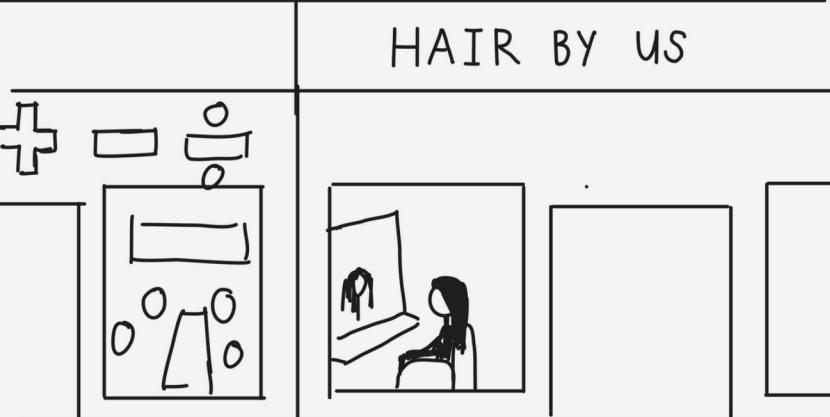
Wearable Glasses



User wearing glasses



Perspective wearing
Grapevine glasses



Sketching Explorations

Mobile App

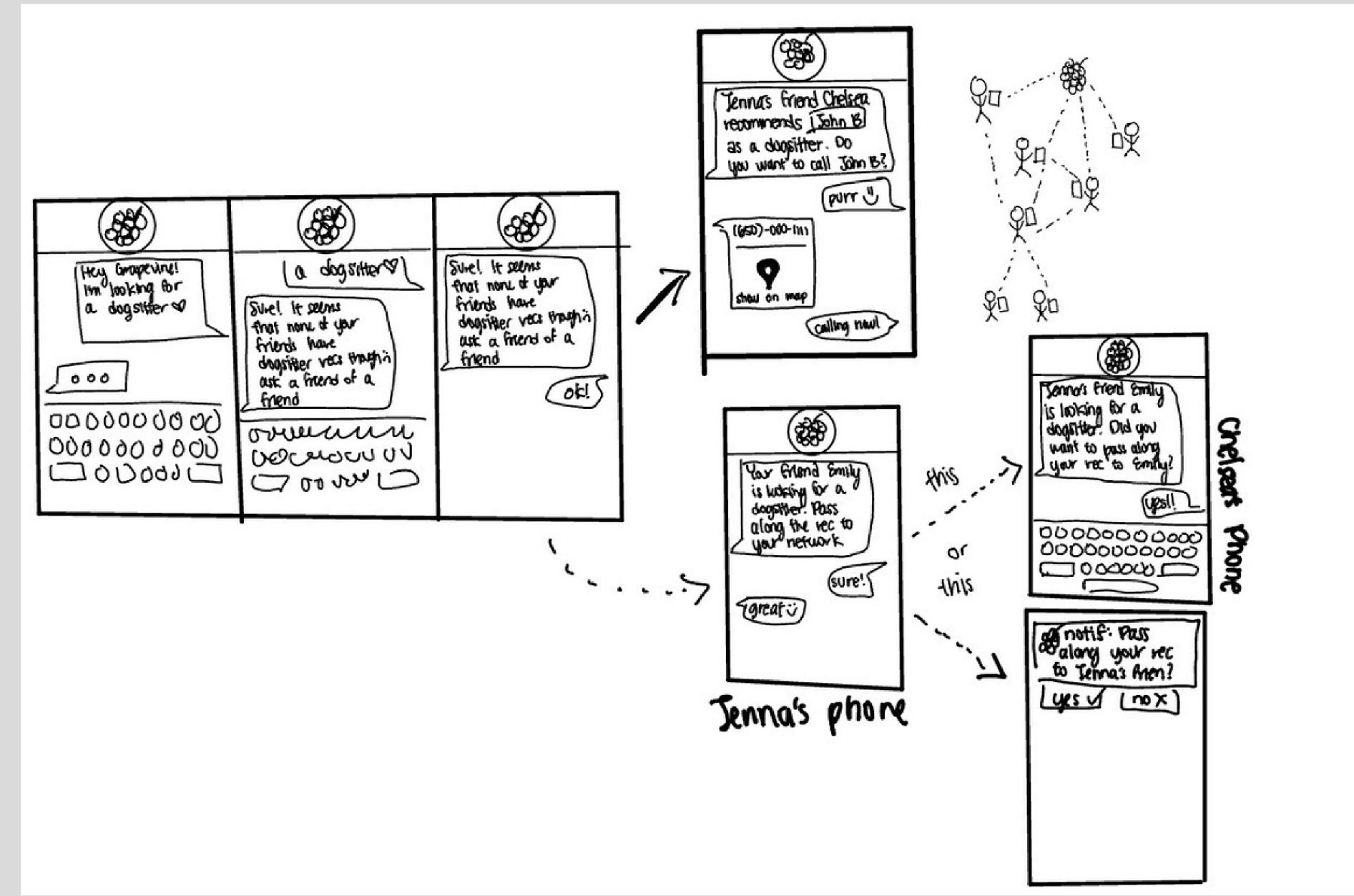
The image displays five hand-drawn wireframe sketches of a mobile application interface, arranged horizontally. The sketches are labeled with their respective screen names:

- Grapevine**: Shows a list of user profiles with their names, descriptions, and icons. Examples include "Jenna Recs Mr. Awesome", "Chelsea Recs 2hr supercuts", and "Chelsea's Friend Recs Rotonoters".
- Search**: A search bar with the placeholder "Plumber?". Below it is a list of search results: "Rotonoters (Juan Rec)" and "Plumber Man (Riley Rec)".
- Leave a Rec!**: A form for leaving a recommendation. It includes fields for "Add photos" (with a plus sign icon), "Name", and "A few words...". A large button at the bottom says "Rec It!!".
- Inbox**: A section showing notifications from other users. It includes messages like "Ari is looking for a nanny", "Jenna is looking for a housesitter", and "Juan liked your rec".
- Profile**: A user profile for "Emily Deng". It includes a profile picture, a "short bio" field, and three circular icons for "fav recs", "add friends", and "settings". Below the profile, there is a section titled "My Recs:" with three cards labeled "Rec #1", "Rec #2", and "Rec #3".

Each sketch includes a footer with a magnifying glass icon, a plus sign icon, and a mail icon.

Sketching Explorations

Text Based





03

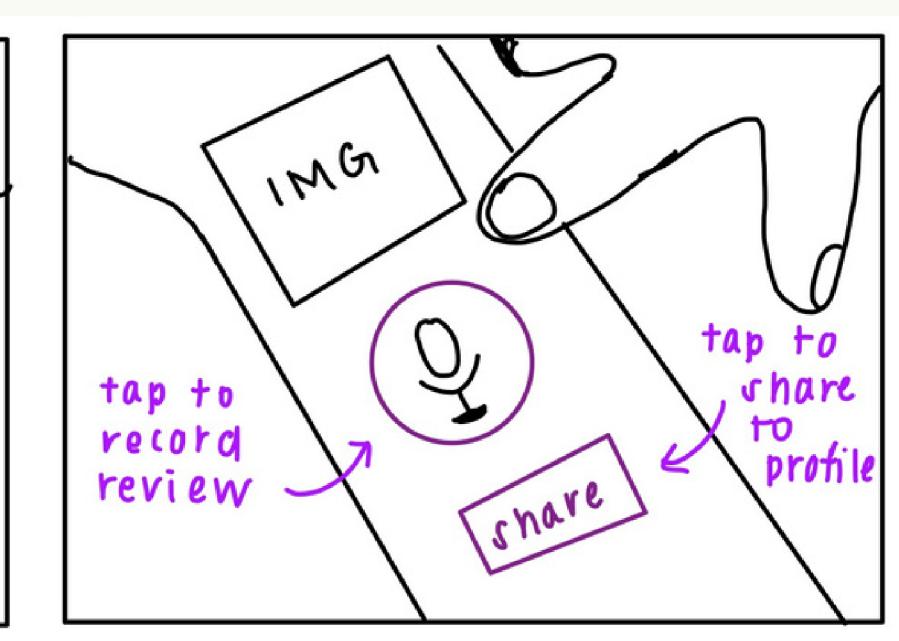
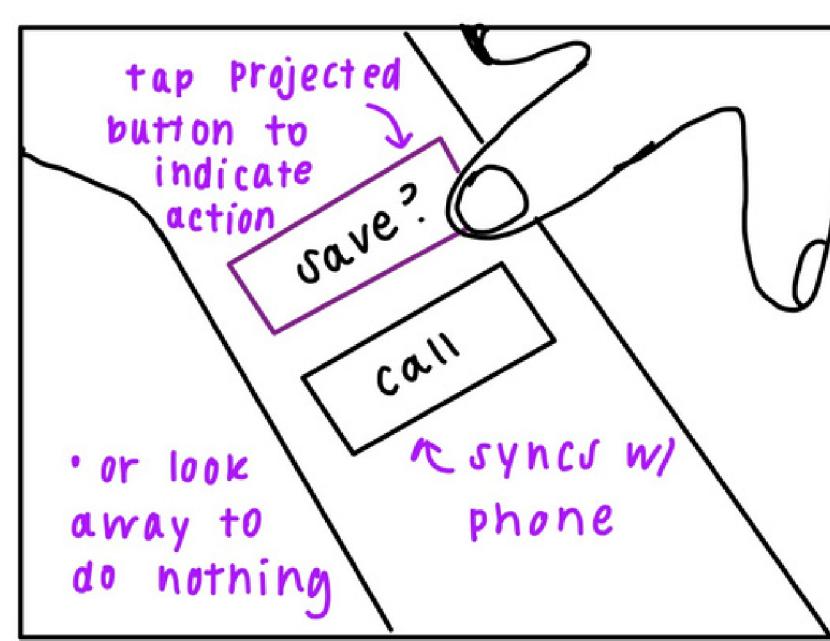
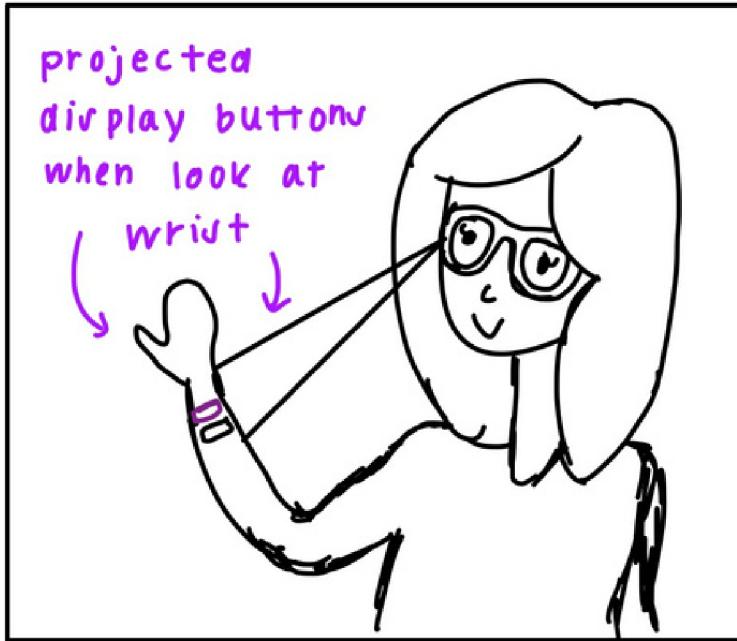
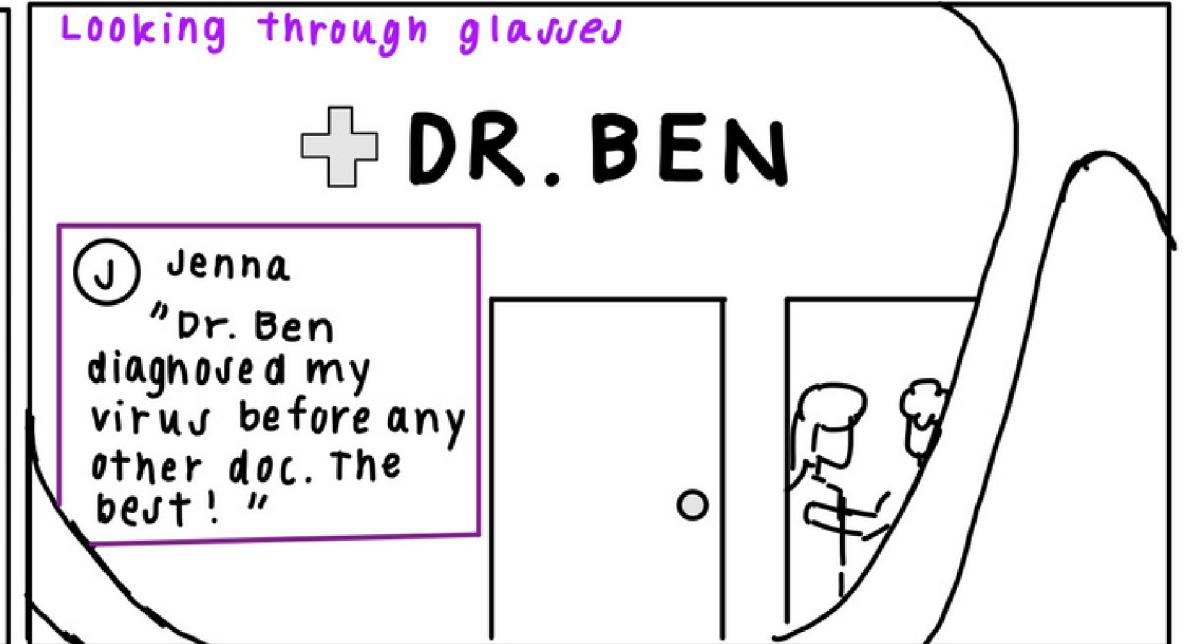
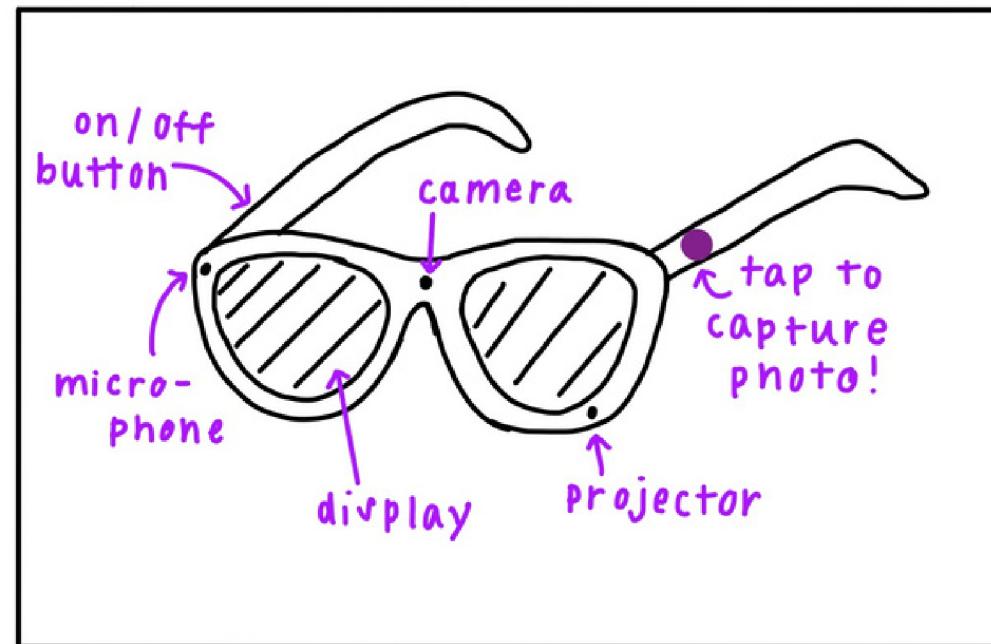
Selected Interface & Rationale

Top 2
Realizations

Mobile App &
Wearable

Diverse Realisation #1

Wearable



Wearable: Pros and Cons

Pros

- People like cool gadgets
- Users are guided by the glasses, which superimpose visual queues onto the user's vision
- Hands-free convenience

Cons

- Users must carry around and wear the glasses
- Not optimal for people who already wear glasses
- Affordability issues
- Vision health concerns and potential nausea

Diverse
Realisation #2

Mobile App

The Grapevine

Jenna recs a new hairstylist: Millie Bobbie 1 hr

Ari recs a new mechanic: Mr. Awesome 3 hr "service was fast and cheap"

Kyle liked Ari's rec 1 day

Search icon, add icon, message icon, profile icon.

search for a service

Map with location pins and a large X drawn over it.

Mechanic

Results:

- Mr. Awesome Mechanic (Recommended by Ari)
- Mr. Kinda Cool Mechanic (Recommended by Sid)
- Mr. Brown (Recommended by Jenna's friend)

Search icon, add icon, message icon, profile icon.

Leave a Rec!

Business Name

say a few words...

Photo icons, camera icons.

rec it!

Search icon, add icon, message icon, profile icon.

Inbox

Jenna is looking for a hairstylist...

I have a rec!

Pass to friend, X button.

Search icon, add icon, message icon, profile icon.

Mobile App: Pros and Cons

Pros

- Accessible and portable: most people carry around smartphones
- Coherent aesthetic
- Easier to integrate more features than wearable or text-based
- Can be used by a wide audience

Cons

- App fatigue: people are averse to downloading another app and making another account
- Learning curve: multiple tabs and complex functionality may confuse users
- Compatibility issues

The Winner: Mobile App!



Mobile apps are easier to acquire, more familiar to the public, and more relevant in terms of the features we are trying to develop

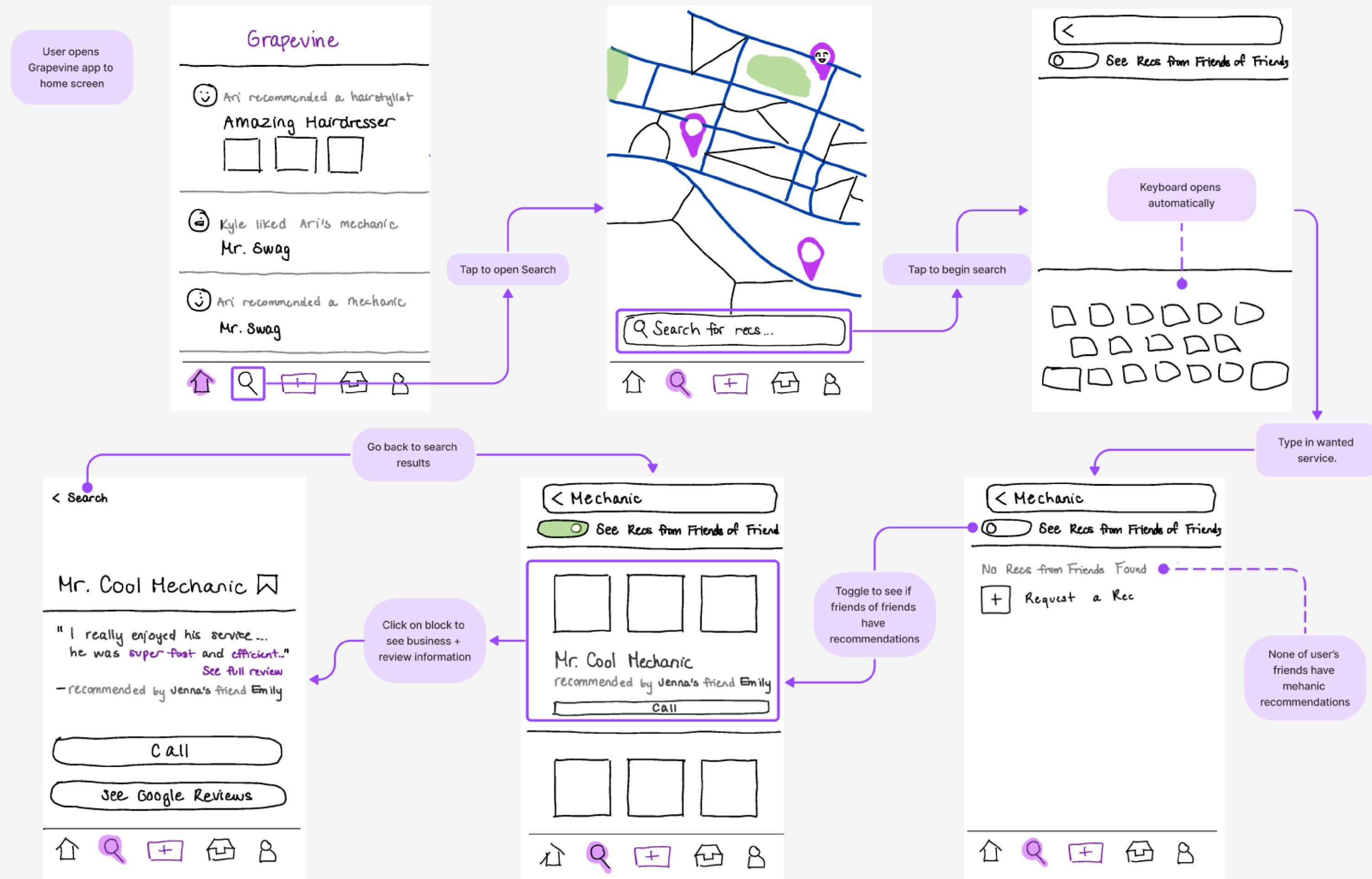


04

Low-fi Prototype: Construction & Task Flows

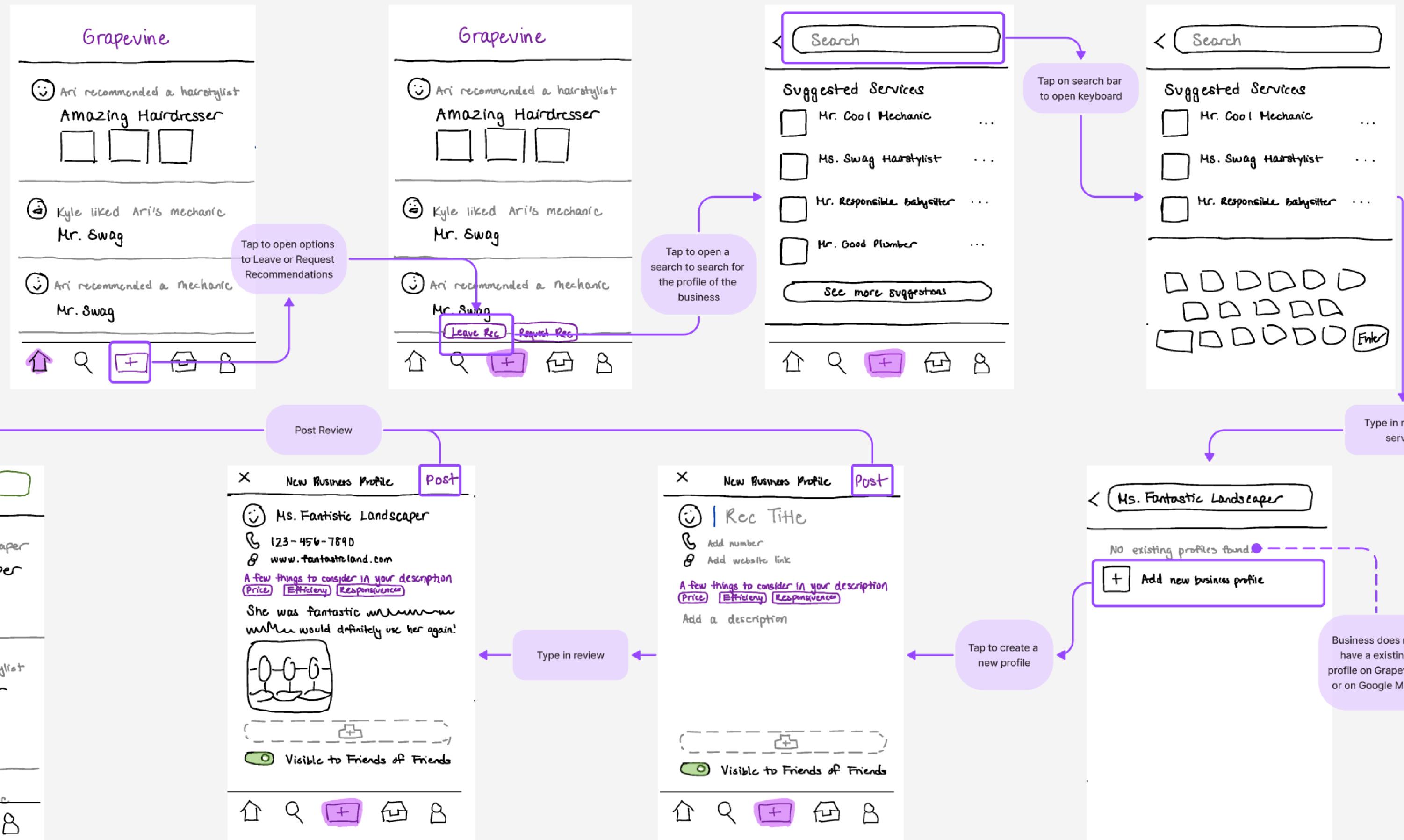
SIMPLE TASK

Searching for a recommendation



MODERATE TASK

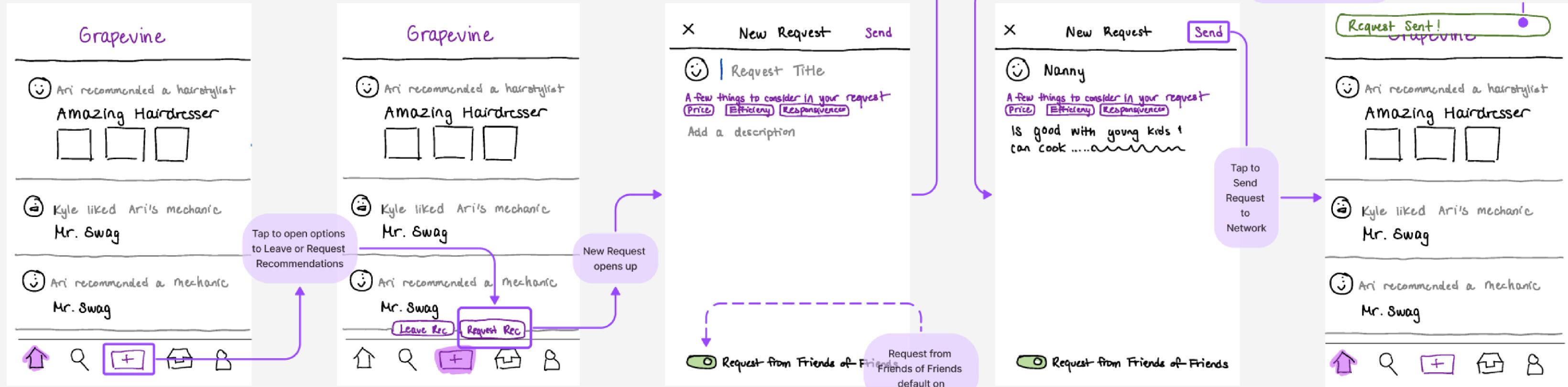
Leaving a recommendation



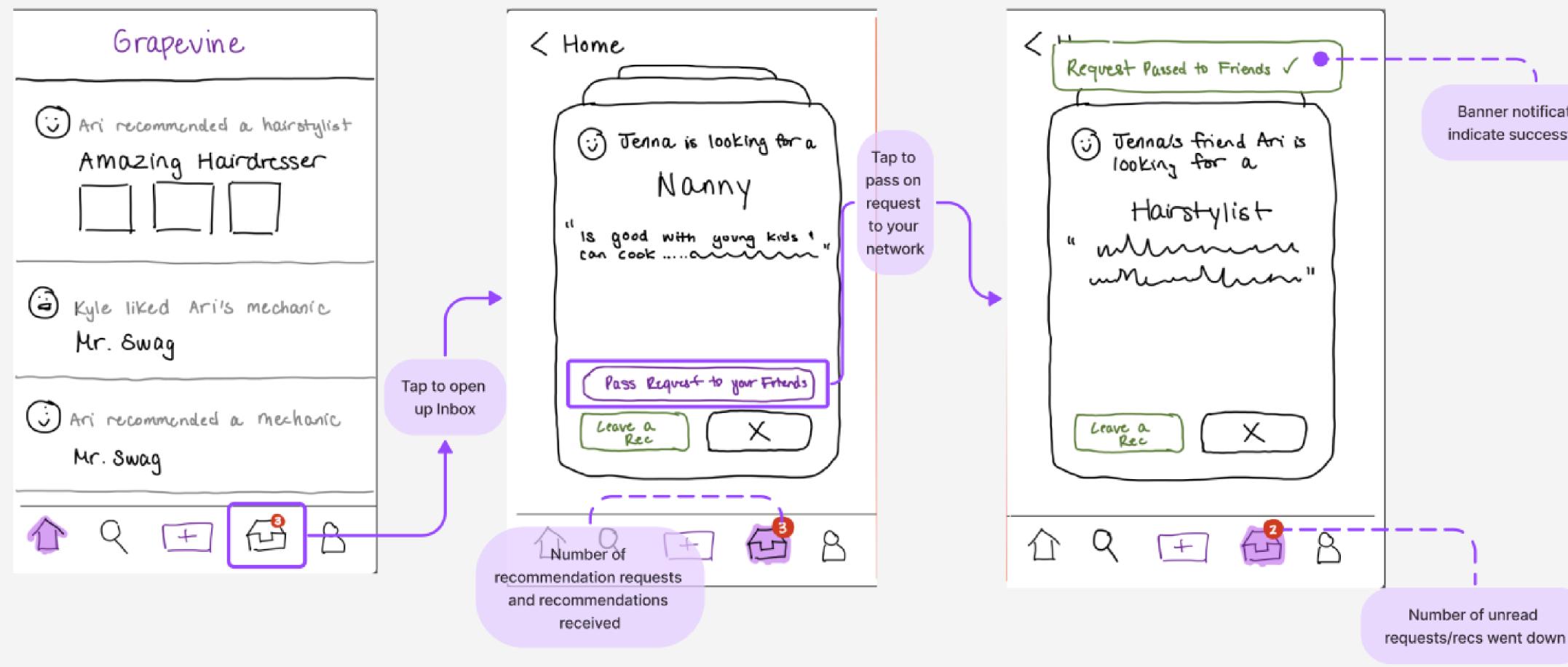
COMPLEX TASK

Requesting a recommendation from your network (including friends of friends); passing on a recommendation request to your friends

REQUEST SENDER POV:



REQUEST RECEIVER POV:





05

Testing Methodology

Participants



Susan

60-70 year old woman who lives in Menlo Park ,
met her at MPX Pilates



Troy

24 year-old working in finance with a computer
science degree, met at Verve Coffee



Ric

mid-50s working in sales, met at Tressider



Benjamin

~75 year-old Israeli immigrant, met at Verve
Coffee



Mackenzie

mid-30s working in lab equipment manufacturing,
met at Tressider



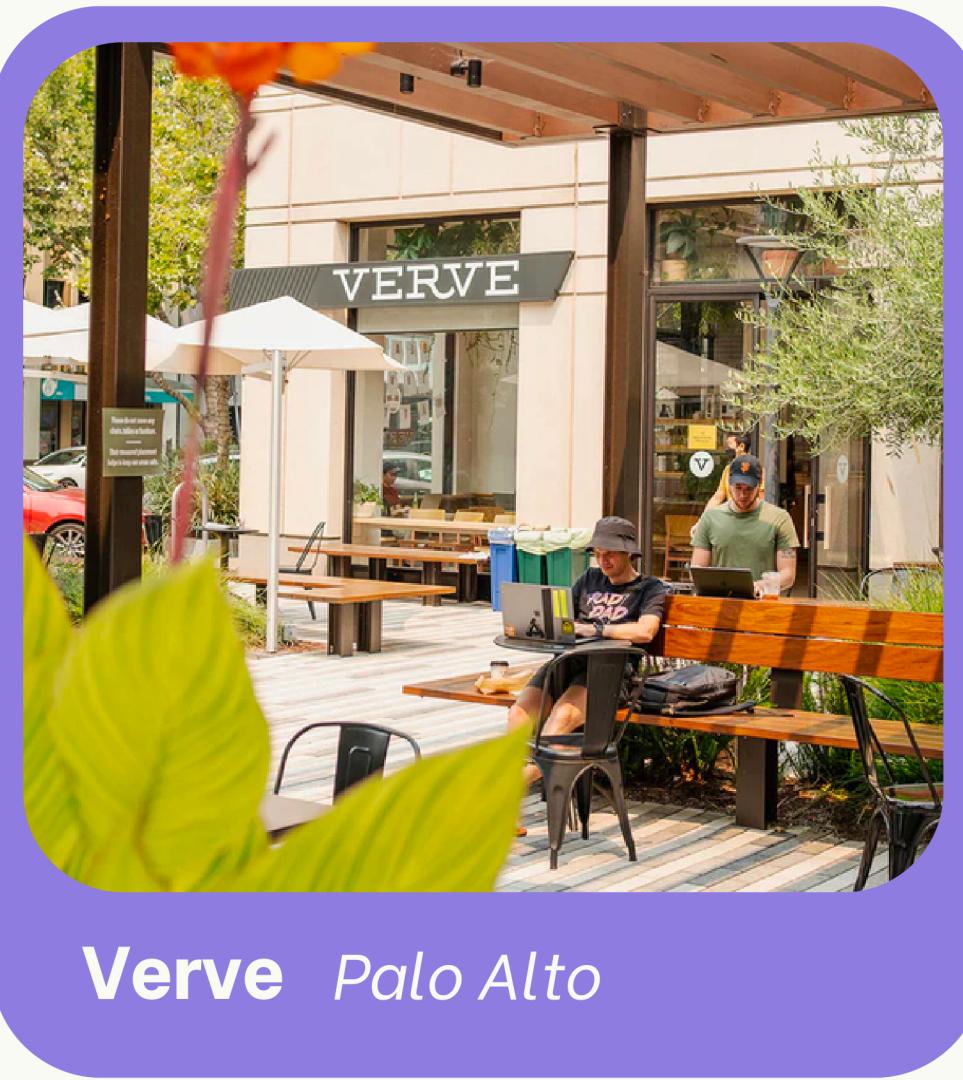
Bradon

mid-30s store employee, met at Trader Joe's

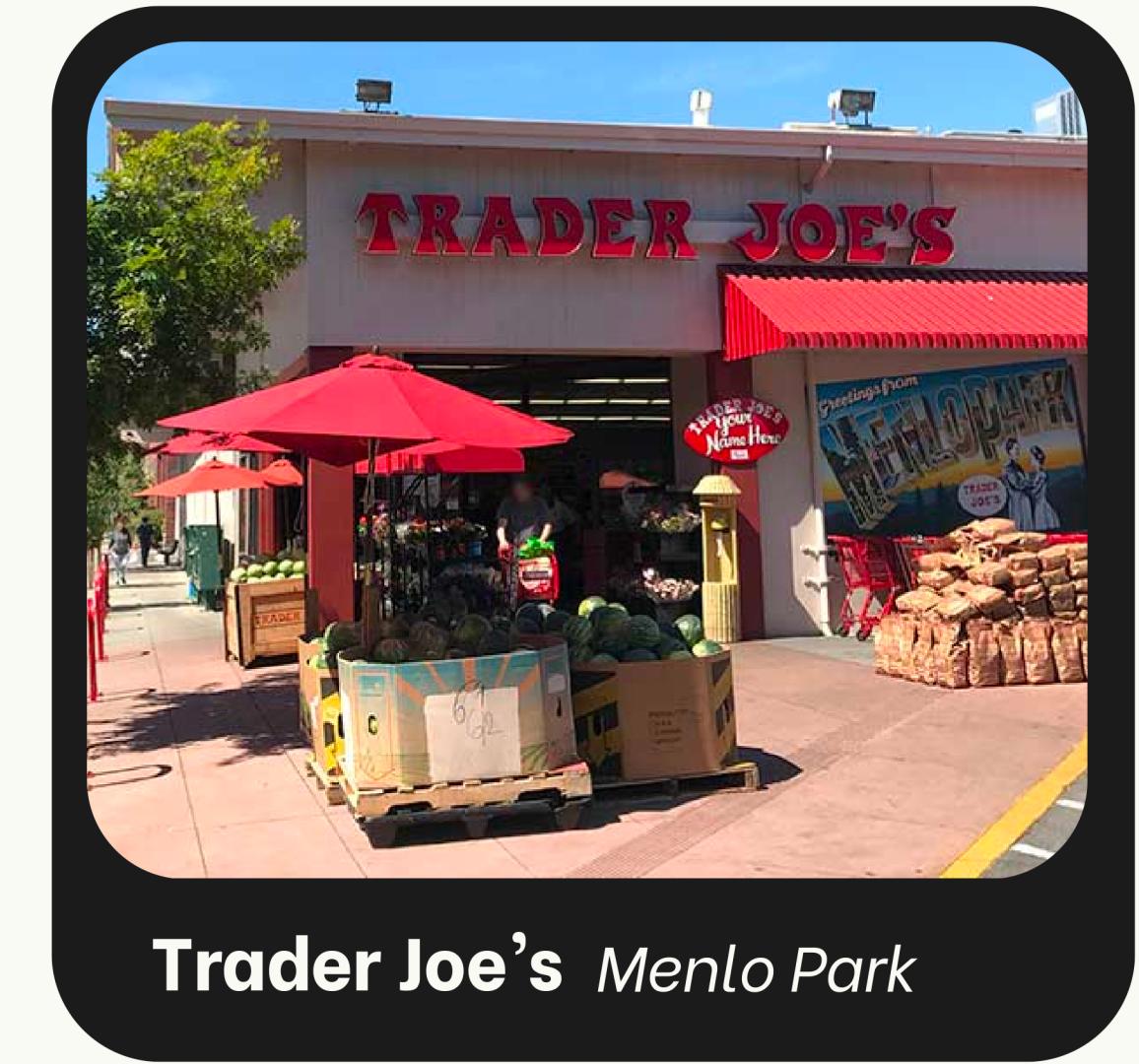
Testing Environment



Tressider
*Stanford
Campus*



Verve *Palo Alto*

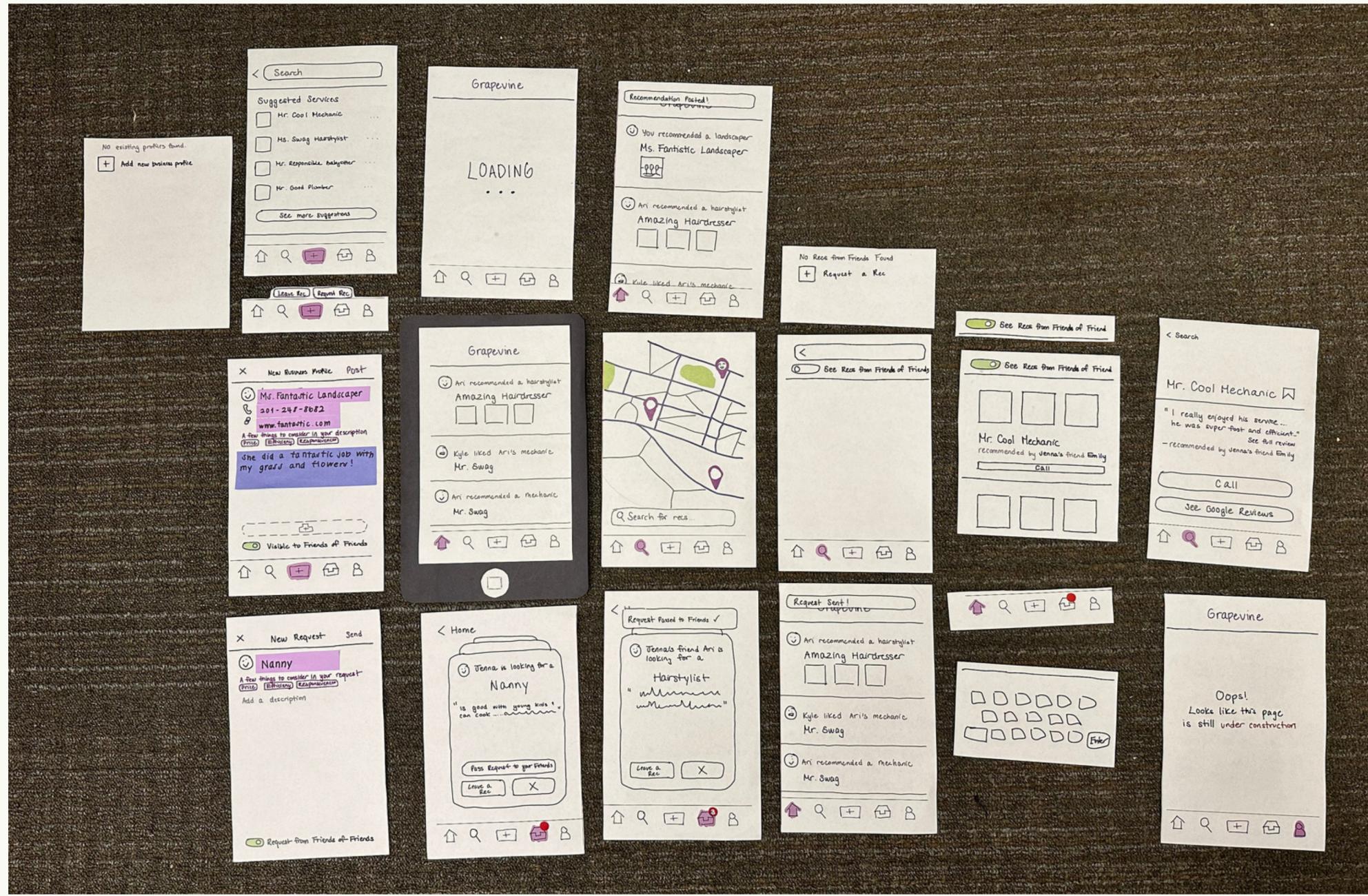


Trader Joe's *Menlo Park*

NPX Pilates
Menlo Park



Apparatus



+



Construction

- Screens were drawn digitally then printed on paper and cut out
- Certain elements like the search bar, keyboard, and nav bar were cut as separate pieces to make switching them out easier
- As testers tapped on buttons, the team quickly replaced the current screen with the corresponding next screen
- Users could tap or type on the screen

Team Roles



Emily: Notetaker



Jenna: Facilitator

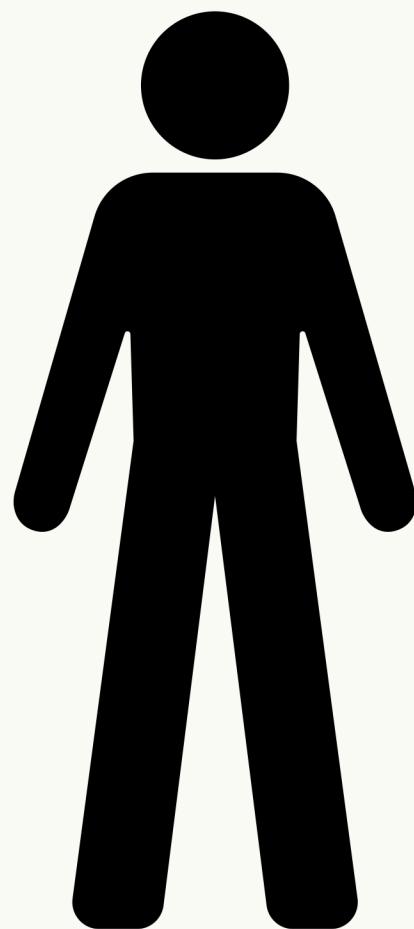


Ari: Videographer

The Process



“Sure!”



**Hi! Would you have 8-10 minutes to help
us with a school project?**

USABILITY GOAL: EFFICIENCY

How **long** does it take to complete each of the tasks?

USABILITY GOAL: ROBUSTNESS

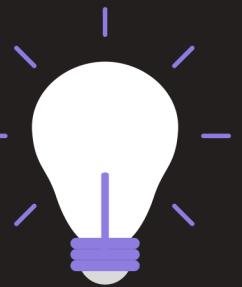
How many **mistakes** did the users make to complete their tasks?



06

Testing Results

Big Picture



Participants were confused by **similar-looking screens** and the **variety of features**, but all **managed to complete their tasks** with some guidance.

Metrics



Bottom-line Data

	Susan	Troy	Ric	Benjamin	Mackenzie	Bradon
Simple	2:47	1:21	1:31	5:23	1:16	1:40
Moderate	1:30	0:58	2:23	n/a	1:01	1:12
Complex	3:50	2:14	1:45	n/a	1:24	1:59

Metrics



Bottom-line Data

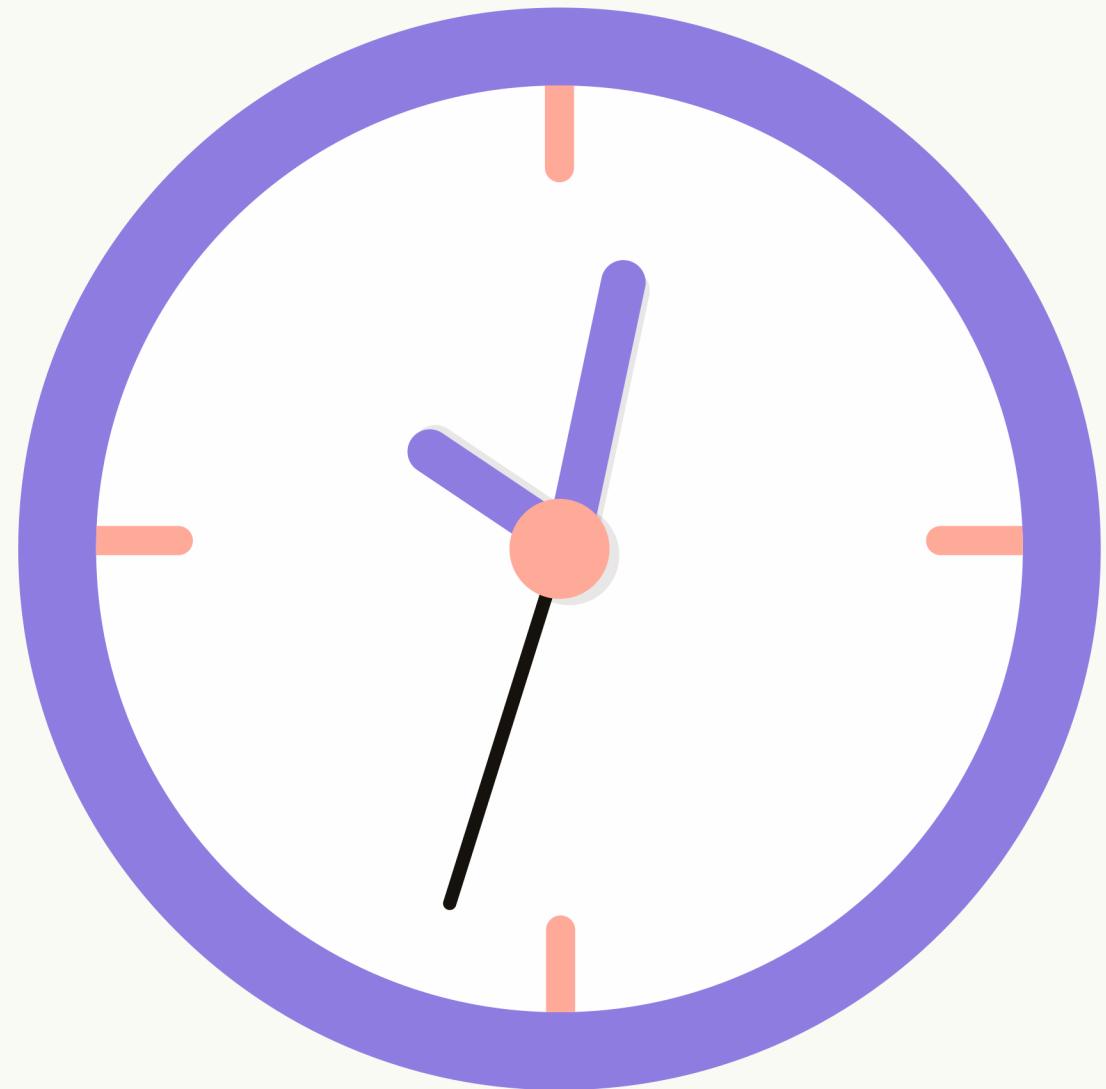
Average time to complete tasks:

Simple Task: 2:19 minutes*

Moderate Task: 1:24 minutes

Complex Task: 2:14 minutes

*outlier: Benjamin



Metrics



Bottom-line Data

	Susan	Troy	Ric	Benjamin	Mackenzie	Bradon
Wrong Button	3	0	2	0	2	3
Hesitation (5+ secs)	1	1	1	3	1	1
Needed Guidance	1	0	1	3	1	0

How well did we achieve
our usability goals based
on the key measurements?

The Verdict:

Efficiency: B

Robustness: B-

Overall, **participants took longer** than we expected to complete all the tasks, especially simple. A critical mistake was **navigating down a wrong path**, which led to many wrong buttons. However, all users were eventually able to complete all the tasks with some prompting.

Relevant Observations

When no friend recommendations appeared, half of the participants **defaulted to requesting recommendations** rather than first toggling on seeing recommendations from friends of friends.

Simple

People **didn't realize that they had to click “Post”** after writing their recommendation.

Moderate

When trying to request a recommendation, most people went to the search tab and **requested through the search tab** rather than the plus button on the navbar

Complex



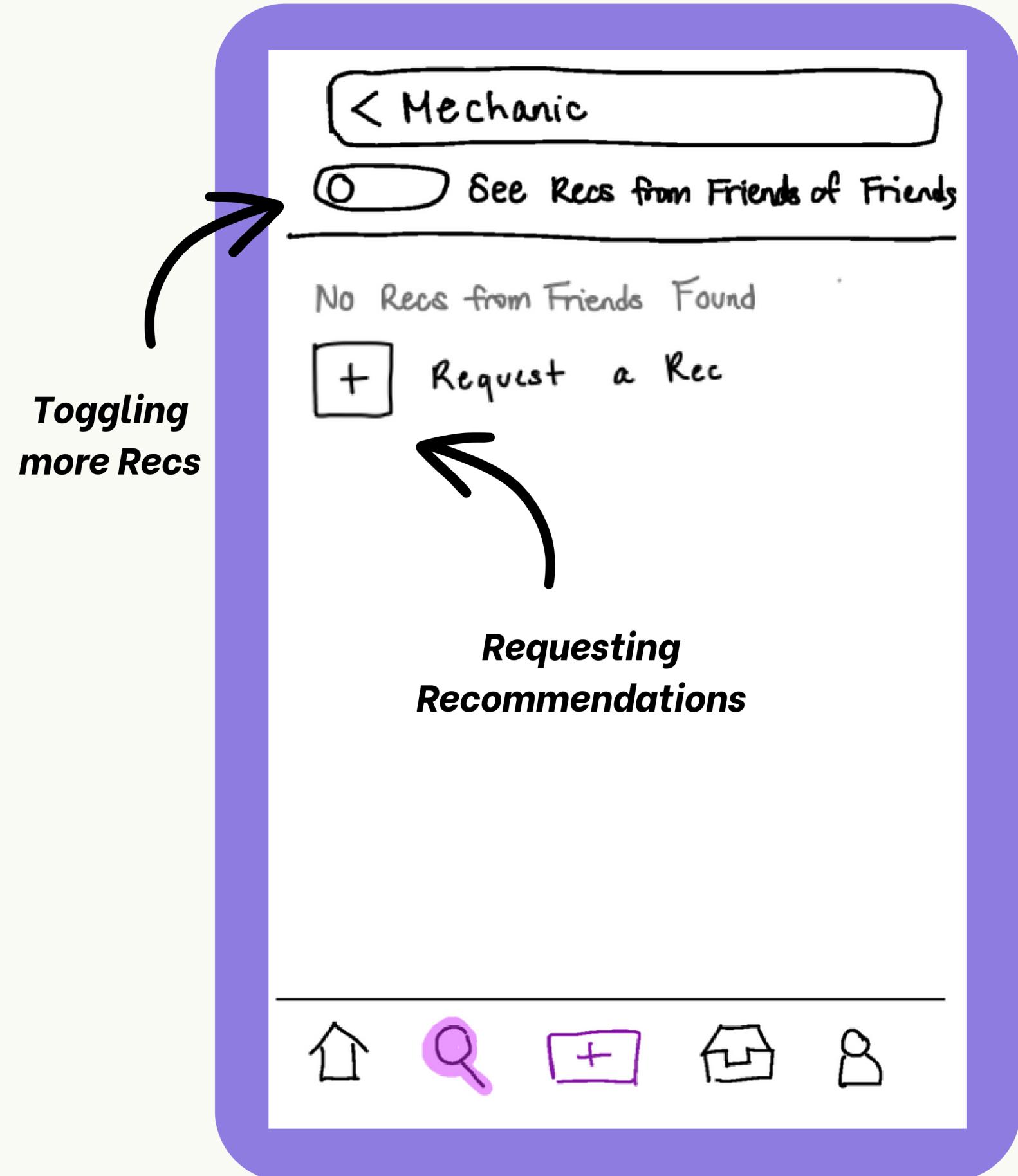
Observations & Implications

THE BAD

Observation:

📝: Finding a recommendation (simple)

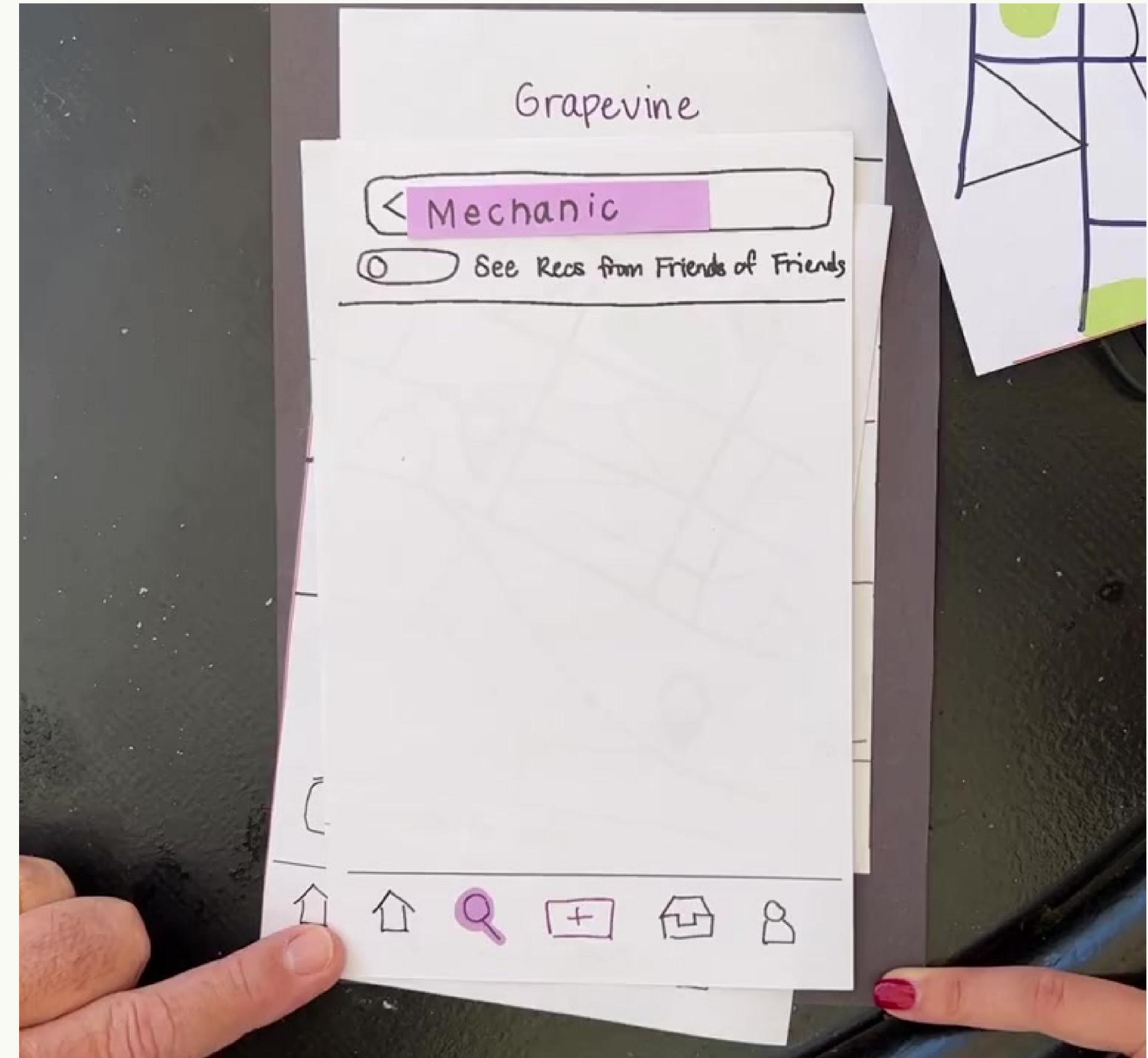
When no friend recommendations appeared, half of the participants **defaulted to requesting recommendations** rather than first toggling on seeing recommendations from friends of friends.



Implication:

💡: Finding a recommendation (simple)

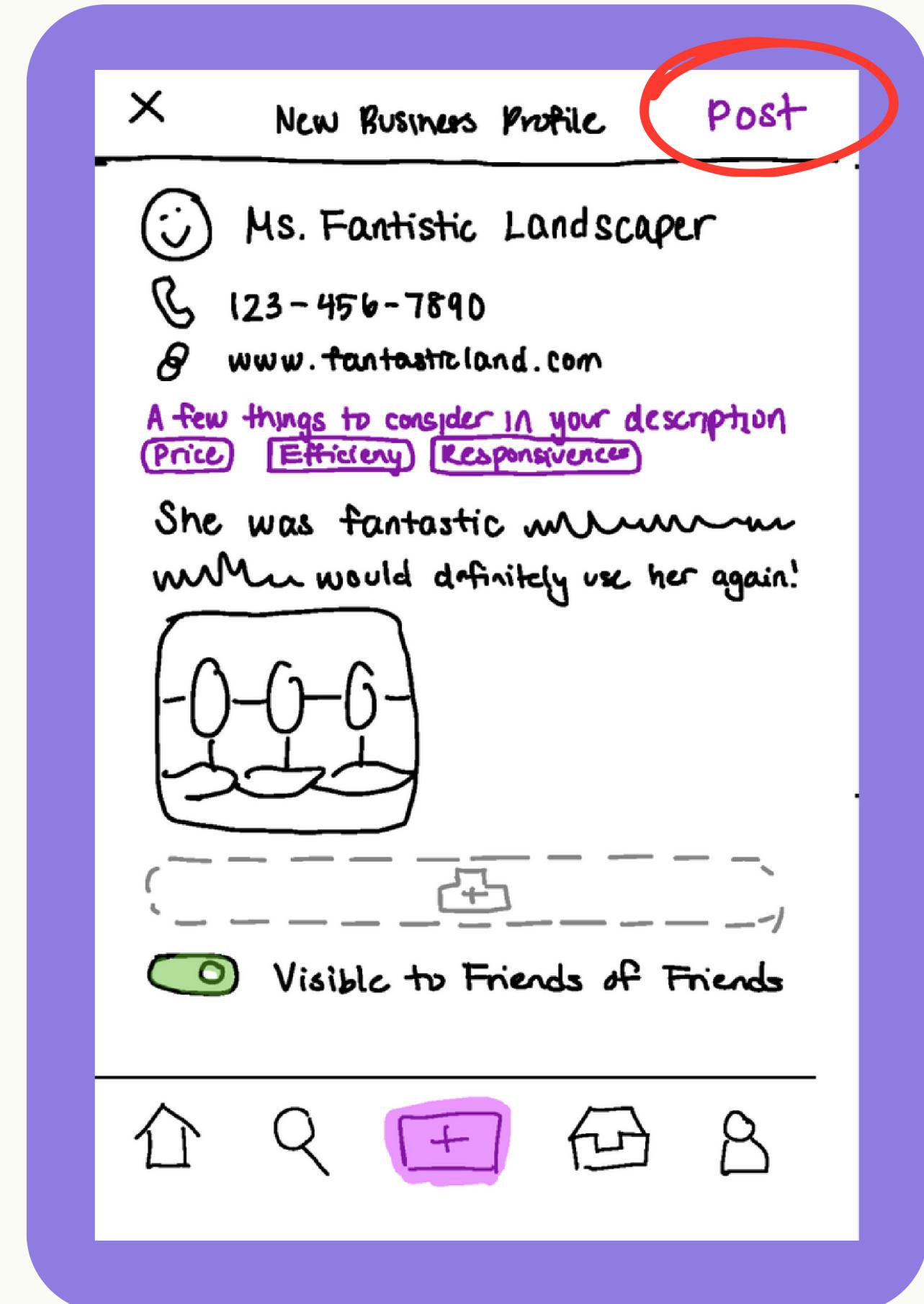
If we want to prevent users from immediately requesting a rec, we should **emphasize the option to see recommendations from friends of friends** or maybe eradicate the toggle altogether and default to everyone.



Observation:

📝: Leaving a recommendation (moderate)

People **didn't realize that they had to click "Post"** after writing their recommendation.



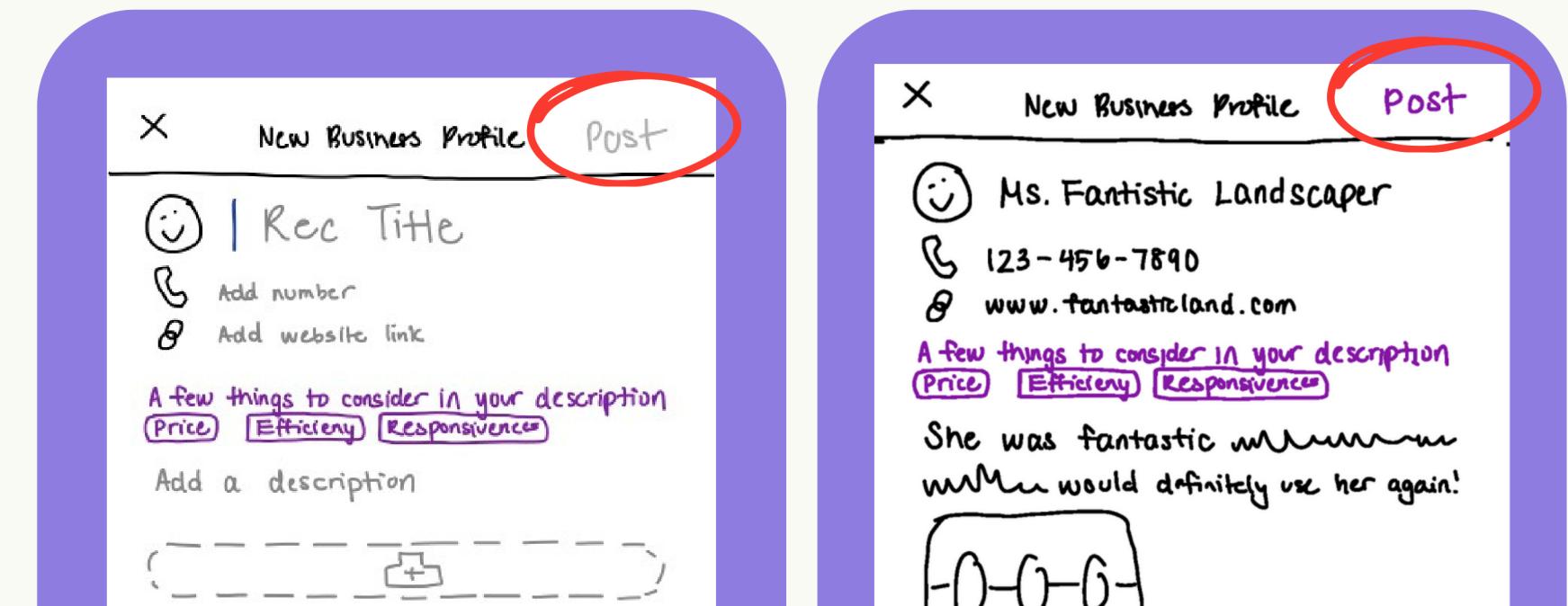
Observation:

📝: Leaving a recommendation (moderate)

People **didn't realize that they had to click “Post”** after writing their recommendation.

Implication:

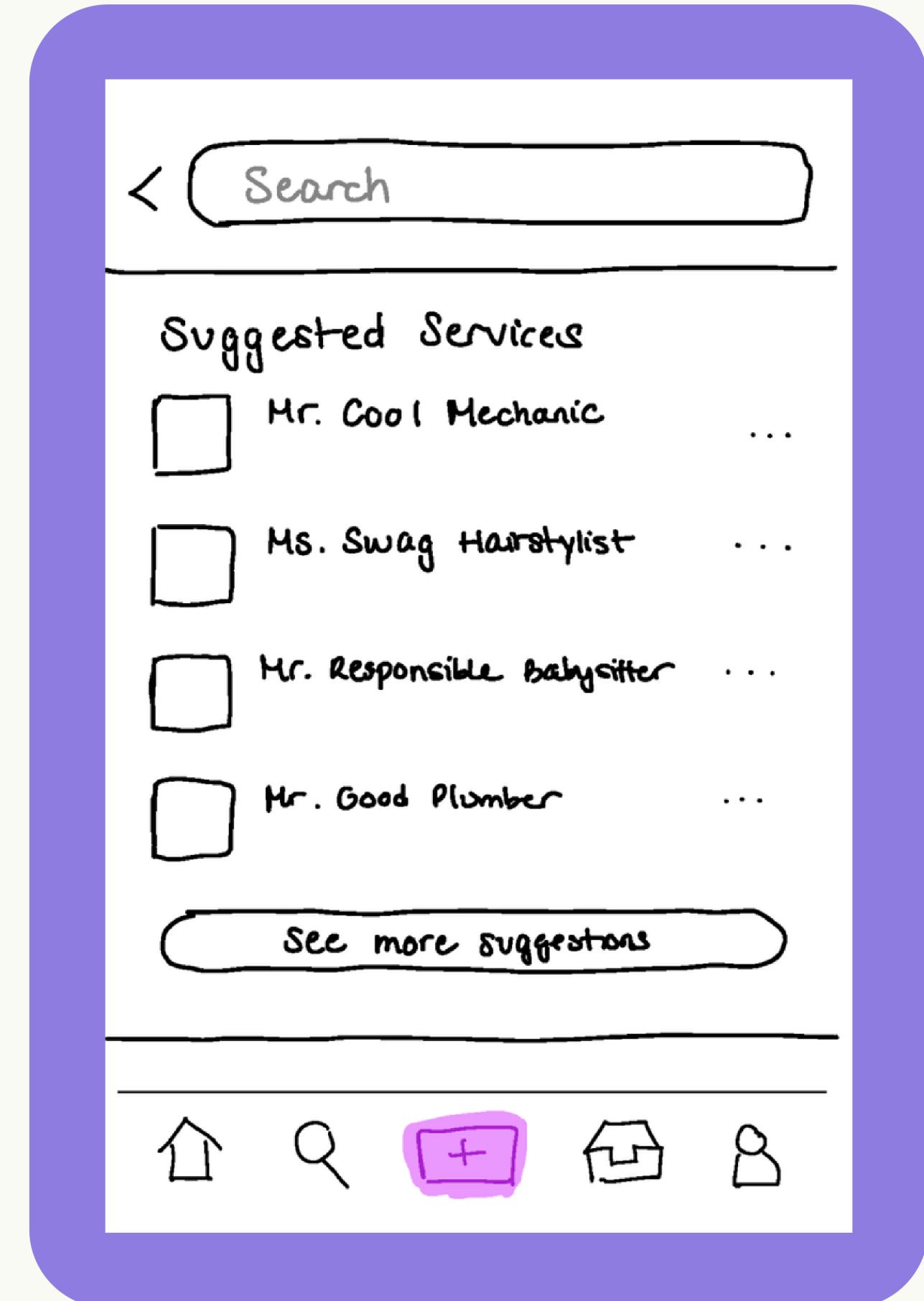
We should better **indicate when buttons are active and not active**.

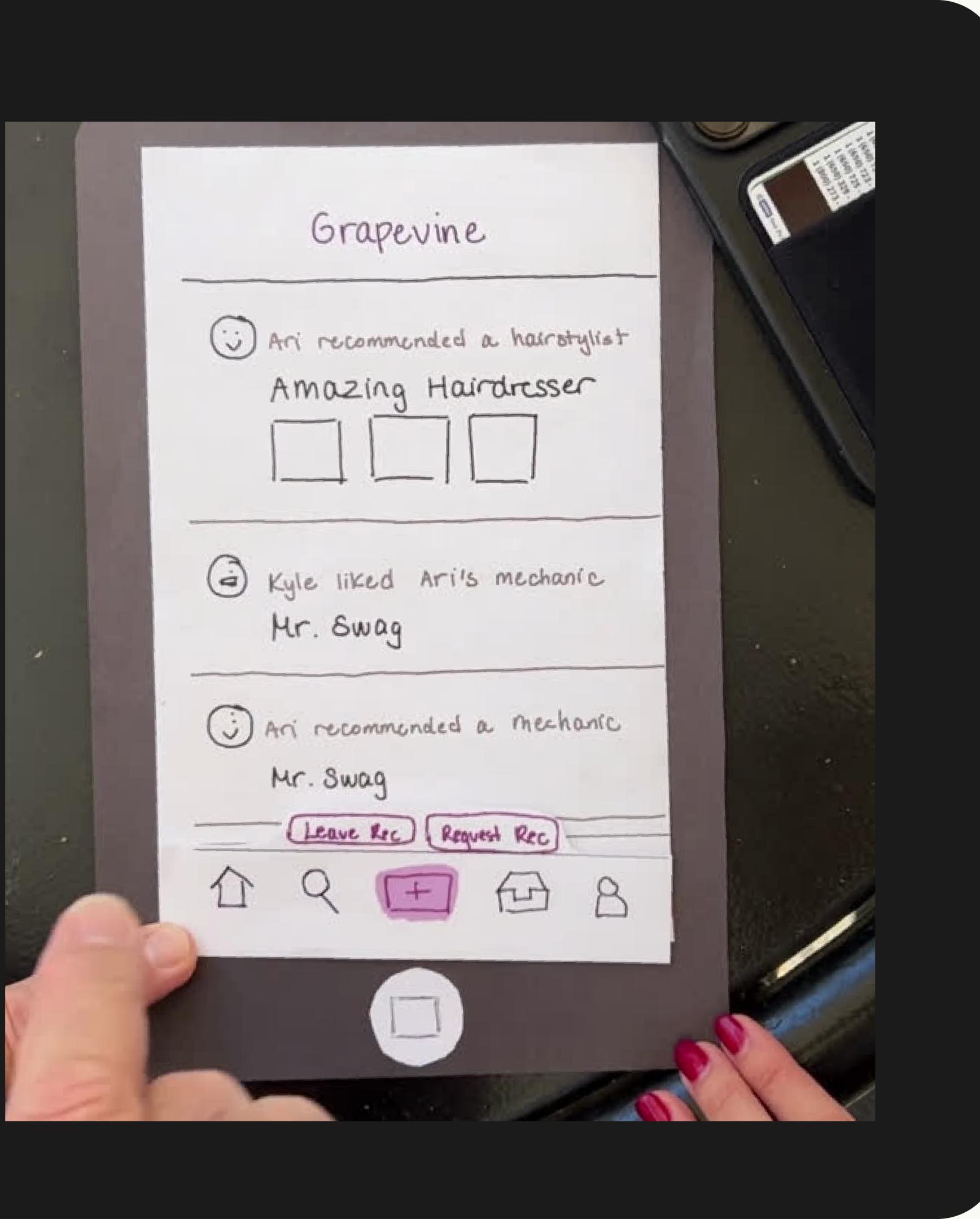


Observation:

: Leaving a recommendation (moderate)

Having a “**Suggested Businesses**” section, as in a suggested businesses to recommend, was confusing to people.





Implication:

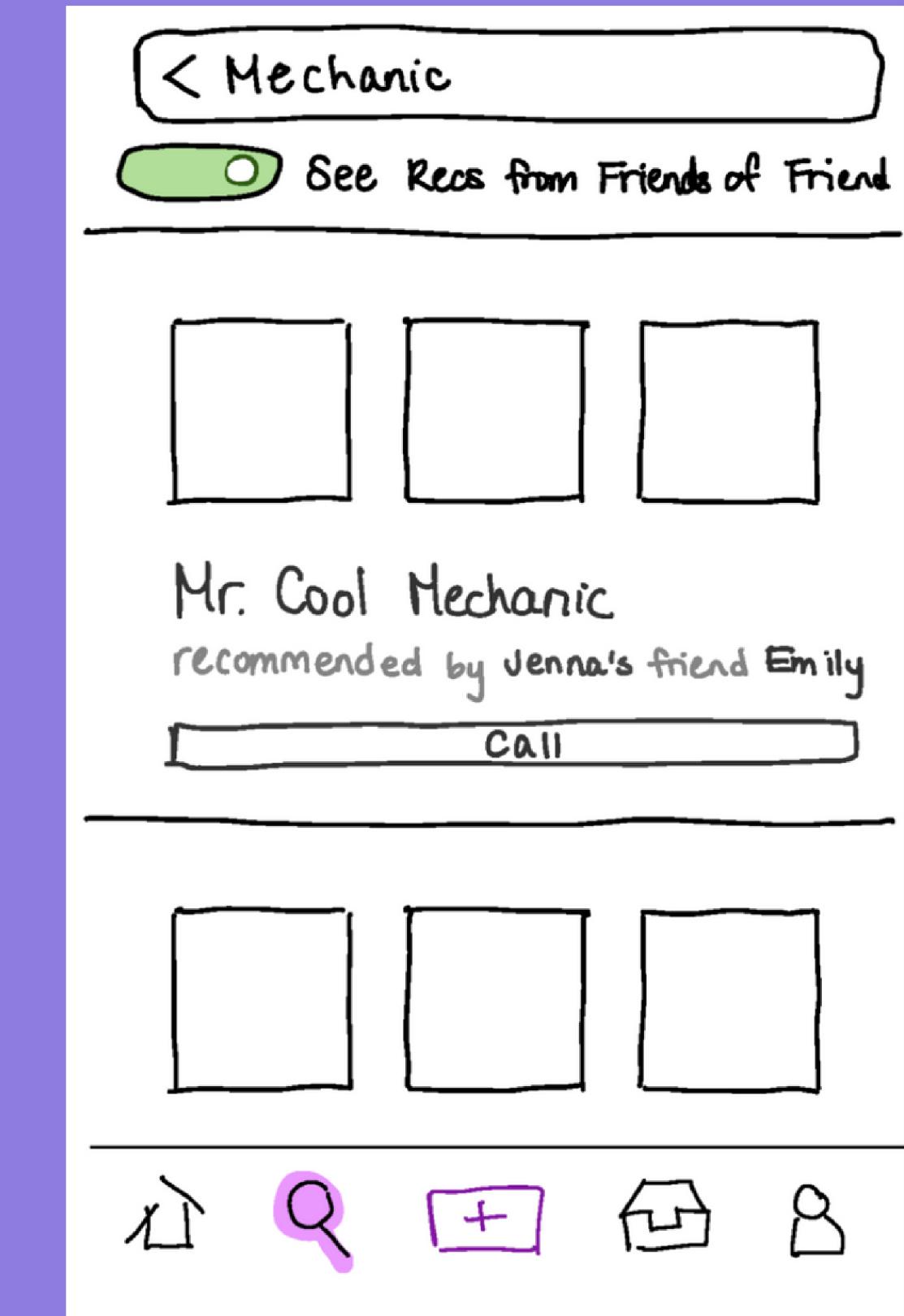
Since searching for recommendation and leaving recommendations both entail searching, we should **clarify our copy** between the flows to prevent confusion

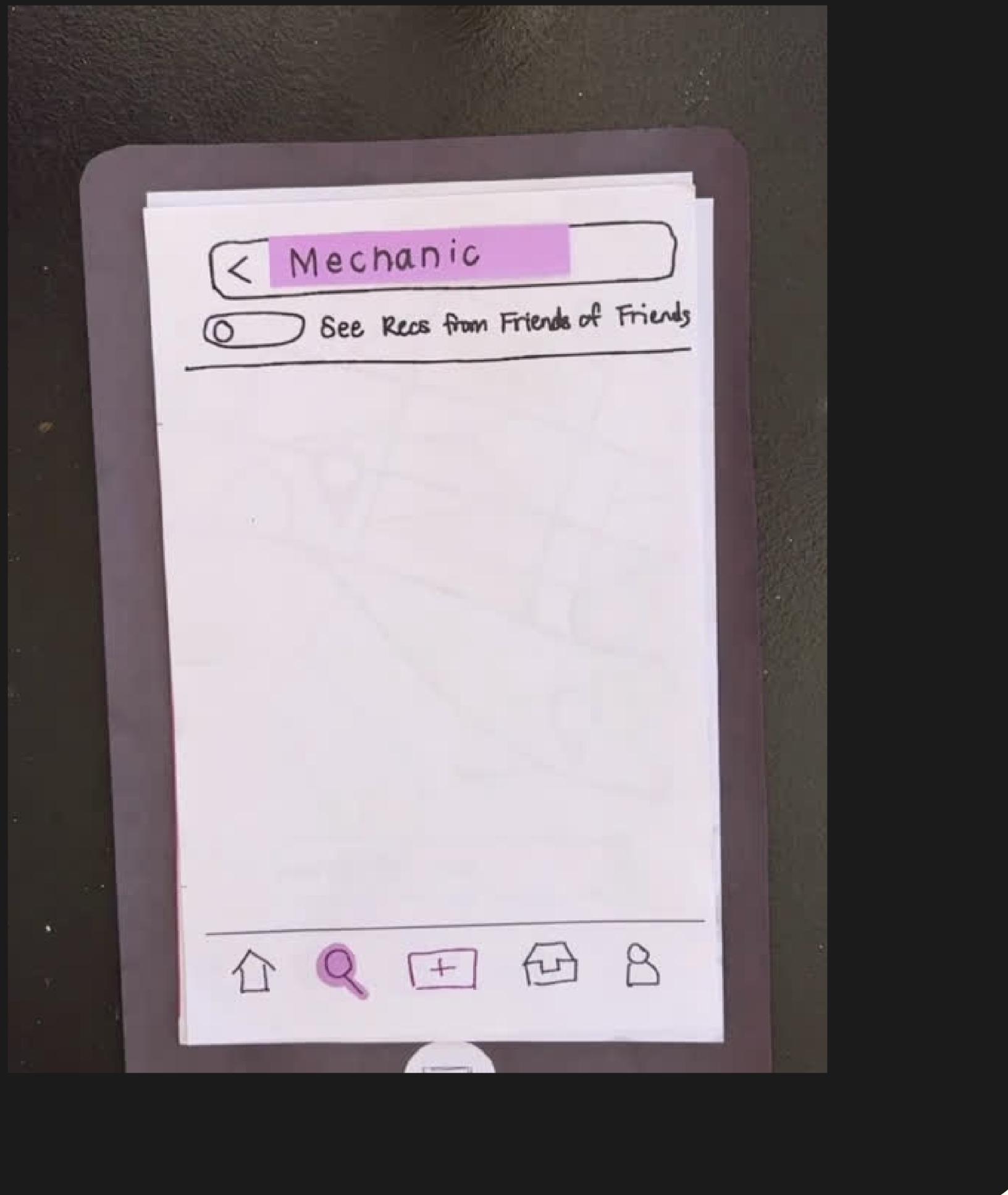
THE MEDIOCRE:

Observation:

📝: Finding a recommendation (simple)

Some participants **automatically clicked the “Call” button** instead of clicking onto the business’ profile as we expected





Implication:

Either people would rather call the business first rather than learning more, the “Call” button was very compelling, or there wasn’t enough of an indication that you could click into a business’ profile

Observation:

: Request a recommendation (complex)

When trying to request a recommendation, most people went to the search tab and **requested through the search tab** rather than the plus button on the navbar

Grapevine

 Ari recommended a hairstylist
Amazing Hairdresser

 Kyle liked Ari's mechanic
Mr. Swag **What we expected**

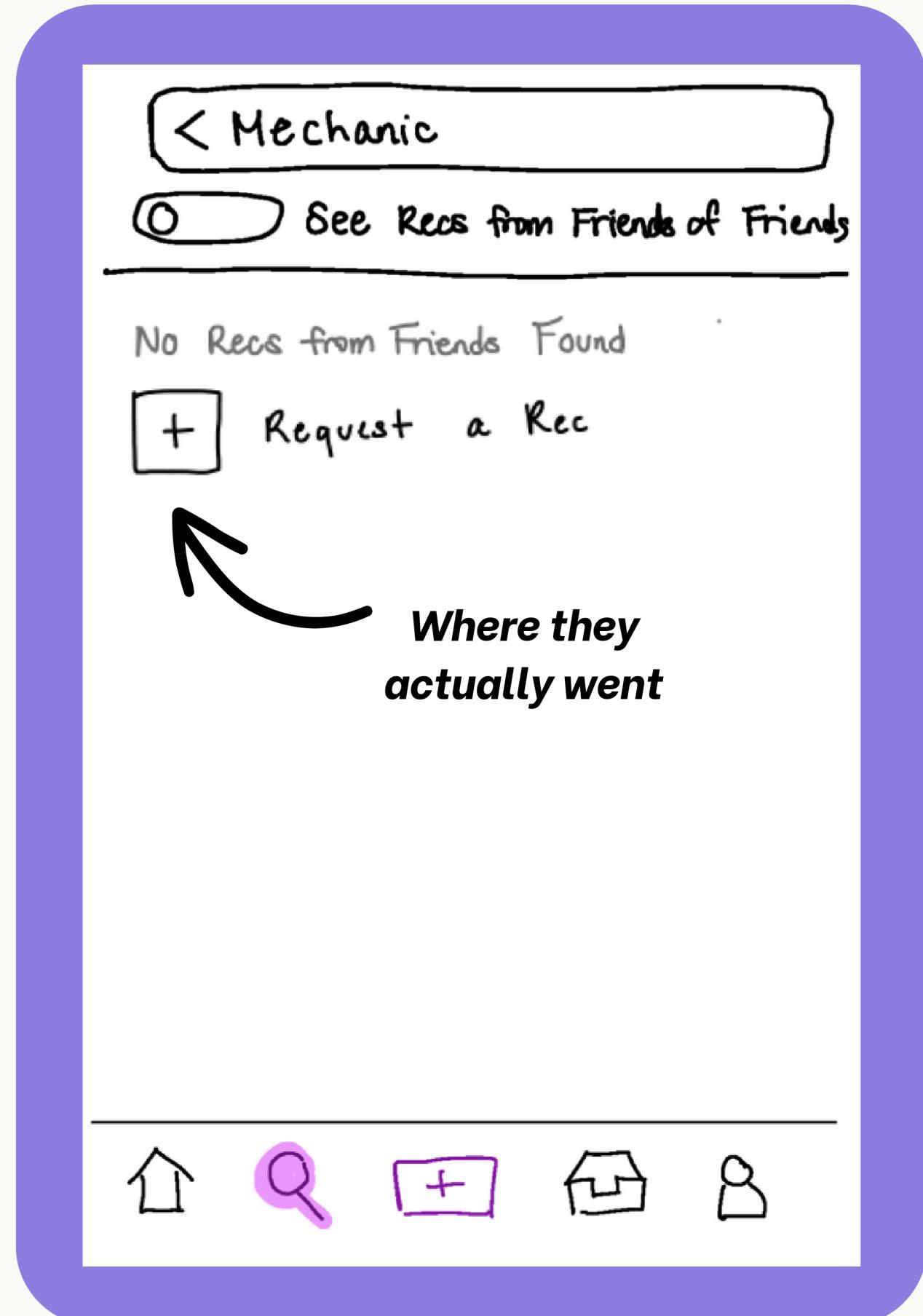
 Ari recommended a mechanic
Mr. Swag **them to click**

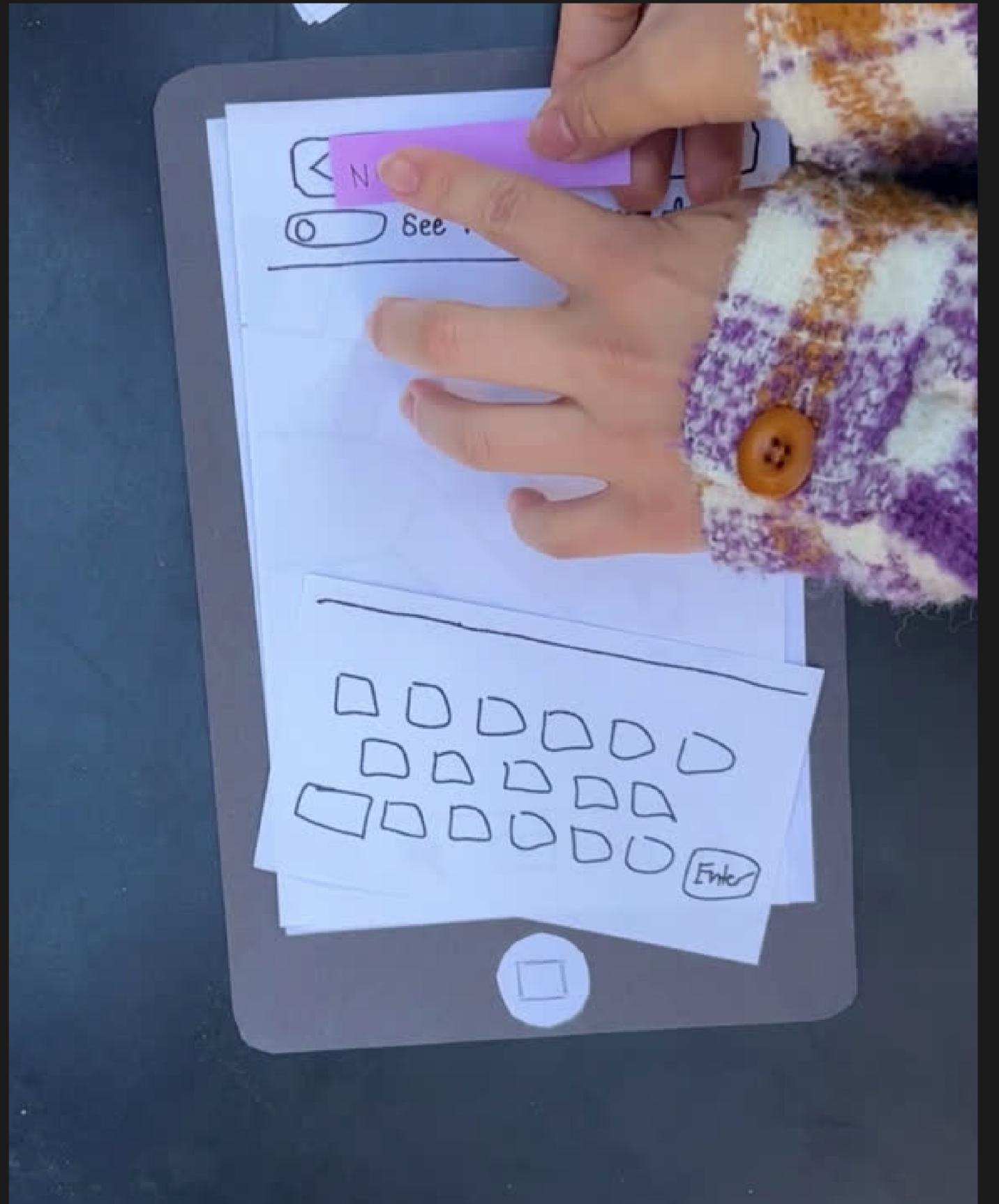
    

Observation:

: Request a recommendation (complex)

When trying to request a recommendation, most people went to the search tab and **requested through the search tab** rather than the plus button on the navbar





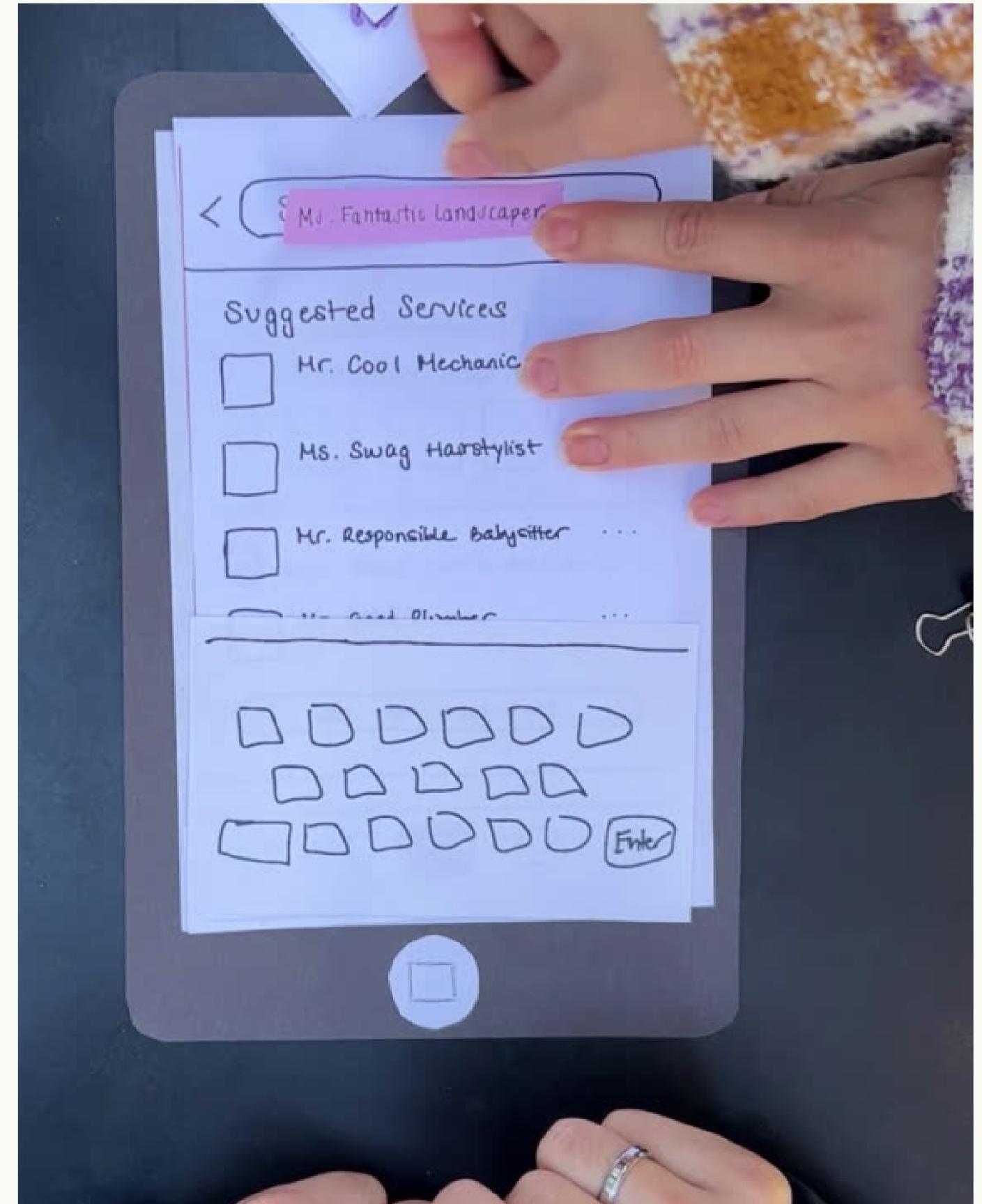
Implication:

It is more intuitive to users to request through the search tab, even though our intention was for requesting via search to be a last resort after no search results are found. We should either **make the requesting from the plus button more prominent or even get rid of that pathway entirely**

THE GOOD:

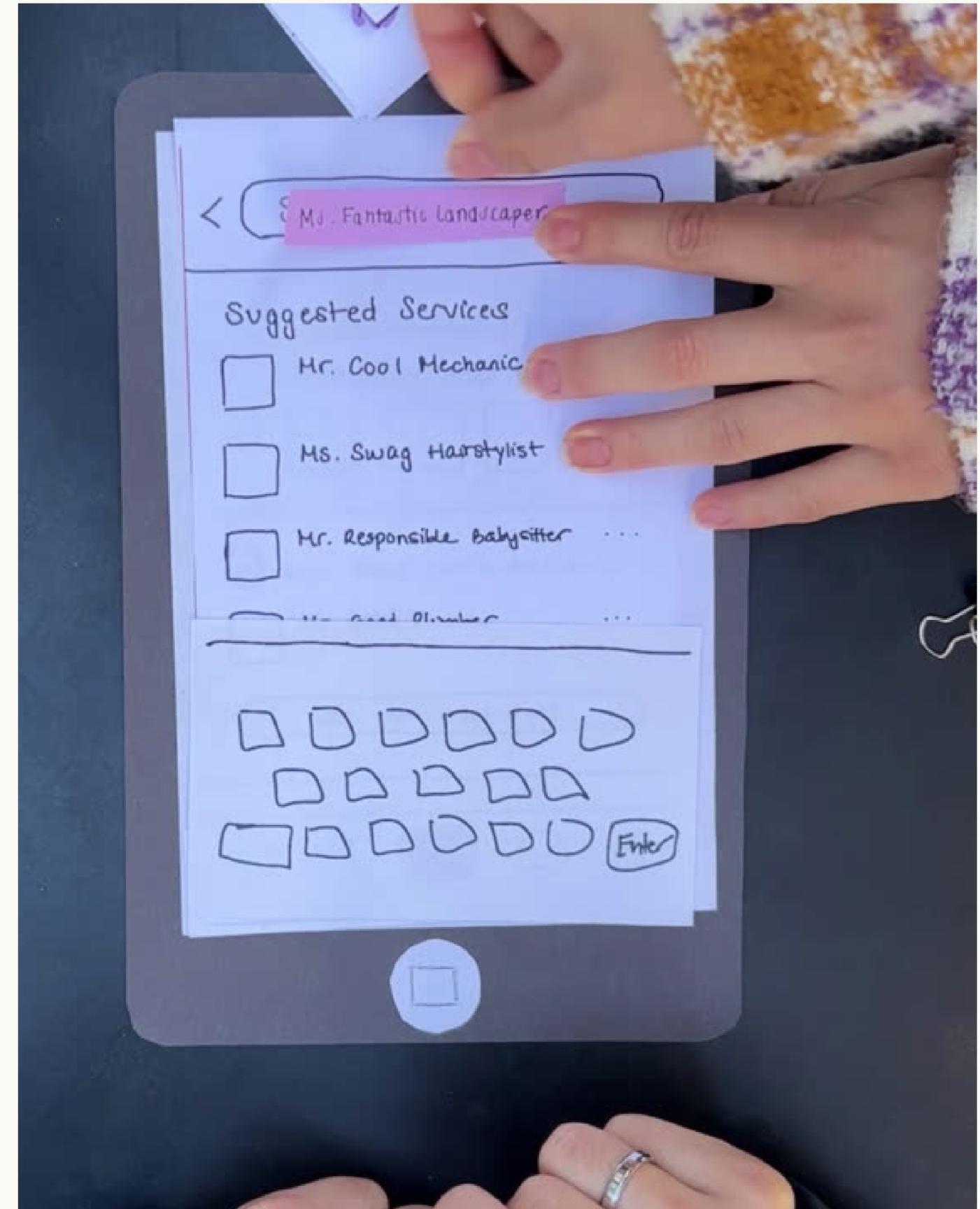
Observation:

People had an **easy time searching** and understanding the concept of recommendations from friends of friends



Implication:

Our easy task is easy! That **flow** **should be preserved**, and there is no need to explain the concept of friends of friends or tapping into your friends' networks.



Observation:

Everyone **was able to request a recommendation**, even if it wasn't via the flow we expected people to take

Implication:

Having multiple pathways to achieving the task could be useful, especially if a need for the task could arrive in different scenarios (i.e. requesting a rec after no search results vs requesting a rec with someone specific in mind)

Next Steps

Based on our tests, we plan to....

Change how recommendations from friends of friends become **visible**

Make certain flows **entail less clicks**

Better indicate **button activation**

Change the default page to search

Resolve **confusing copy**

What can testing not reveal?

How much people want to **see
recommendations from friends of friends**

How often people would actually **leave
recommendations**

Whether or not people would reach for
Grapevine over Google



08

Appendix

Wearable: Pros and Cons

Pros

- People like cool gadgets
- Users are guided by the glasses, which superimpose visual queues onto the user's vision
- Hands-free convenience, easily take pictures and post recommendations
- Unique product, less competition
- Immersive experience
- AR/VR integration
- Can be connected to smartphones (think Apple Watch)
- Can be connected to other smart products (IoT)
- Potentially more accessible
- Future Expansion of features: health and fitness tracking

Cons

- Users must carry around and wear the glasses
- Harder to integrate software updates
- Not optimal for people who already wear glasses
- Affordability issues
- Battery life, needs separate charger probably
- Privacy concerns, especially given built-in camera
- Fashion and aesthetics – some people don't like glasses
- Learning curve – not everyone is familiar with wearable technology
- Health concerns with wearing smart glasses for prolonged periods
- Sustainability and waste

Mobile App: Pros and Cons

Pros

- Accessible and portable: most people carry around smartphones
- Coherent aesthetic within app
- Easier to integrate more features than wearable or text-based
- Can be used by a wide audience
- Push notifications can be enabled or disabled
- Navigable visual map
- Better performance for specific tasks
- Potential integration with other apps (Google Maps)

From a developer standpoint:

- software is easier to update
- less NLP than text-based

Cons

- People are averse to downloading another app and making another account, especially people we interviewed
- Learning curve: multiple tabs and complex functionality may confuse users
- reliance on WiFi as opposed to just service
- Takes up storage space
- Privacy concerns
- Potentially addicting (think Instagram Explore or even Venmo transactions page)

From developer standpoint:

- Competitive app market
- Developing a cross-platform app that is compatible across different phone types

Script

1. (Introduce ourselves and the premise of our app) “Our app allows users to see what services their friends are using and liking. In terms of services, we mean mechanics, plumbers, nannies, or even people like doctors. Our app actually extends your network beyond just immediate friends, connecting friends of friends as well. Of course, users can also leave recommendations for their own favorite services to share with others. We picked this domain because public reviews for services are often sparse or misleading, and we picked this solution because people generally trust their network for good service recommendations.”
2. (Simple Task) Ok, so let’s imagine that your car broke down, and you’re looking for a mechanic. Can you try to search among your network for a mechanic that you could visit?
3. (Moderate Task) Great! Now let’s imagine that you really liked a landscaper you worked with recently. Her name is Ms. Fantastic Landscaper. You want to leave a good recommendation to share with your network. How would you go about doing that?
4. (Complex Task: Sender) Ok so some time has passed and now you’re looking for a nanny. Can you try finding a nanny?
 - a. ...So you may have noticed that no one in your network has a recommendation for a nanny right now. Can you think of how you may request a recommendation, in case one of your friends just hasn’t inputted their information into the app? Essentially, you want to make a recommendation request for a nanny.
5. (Complex Task: Receiver) Nice job! I see that you have sent this request out among your friends. Now let’s imagine that you are your friend, so you just received the request for the nanny. Unfortunately, you don’t have a nanny in mind to fulfill the request. How would you respond to this screen
 - a. Great! Thanks for passing along the request to your network, perhaps one of them will have a good nanny recommendation!

Critical Incident Log

Tester	Incident	Severity
Susan	Clicked wrong button	2
Susan	Clicked wrong button	2
Susan	Clicked wrong button	2
Susan	Hesitated when looking for next step	1
Susan	Needed guidance to figure out how to leave recommendation	3
Troy	Hesitated when looking for next step	1
Ric	Clicked wrong button	2
Ric	Clicked wrong button	2
Ric	Hesitated when looking for next step	1
Ric	Needed guidance to figure out how to post recommendation	3
Benjamin	Hesitated when looking for next step	1
Benjamin	Hesitated when looking for next step	1
Benjamin	Hesitated when looking for next step	1
Benjamin	Needed guidance to figure out how to leave recommendations	3

Critical Incident Log (cont.)

Benjamin	Needed guidance to figure out how to post recommendations	2
Benjamin	Needed guidance to figure out how to request recommendations	3
Mackenzie	Clicked wrong button	2
Mackenzie	Clicked wrong button	2
Mackenzie	Hesitated when looking for next step	1
Mackenzie	Needed guidance to figure out how to leave recommendation	3
Bradon	Clicked wrong button	2
Bradon	Clicked wrong button	2
Bradon	Clicked wrong button	2
Bradon	Hesitated when looking for next step	1