

Low-Fi Prototyping



Lunar

Closer connections, no matter the hour



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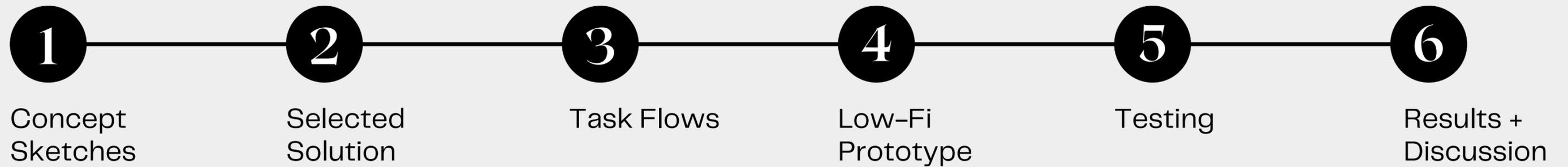
Nightshift workers are often lonely, believe that work and personal life can't go hand in hand, and that they have little to no time to care for connections with others

Problem Statement

Final Solution

An online community of night shift workers with similar backgrounds, work schedules, situations etc. to share resources, tips, and support each other

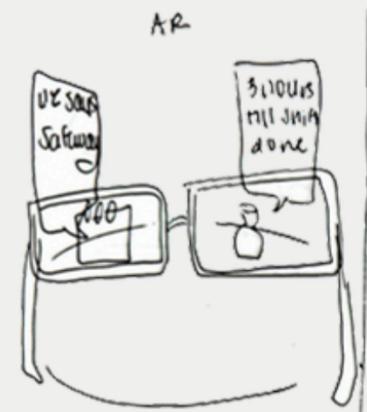
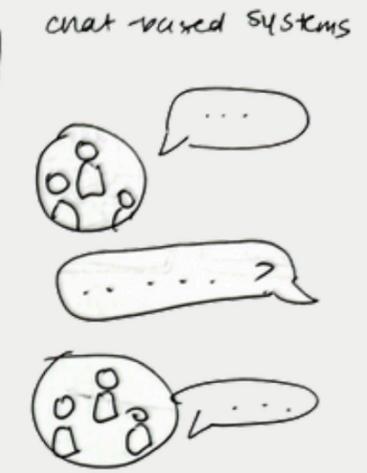
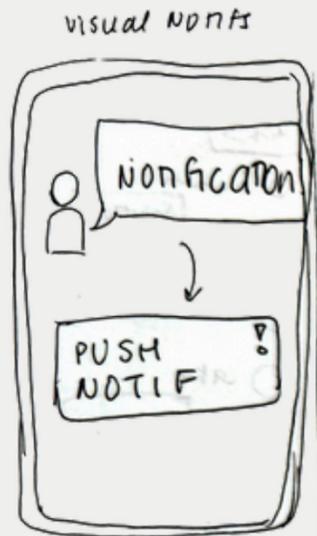
Presentation Roadmap



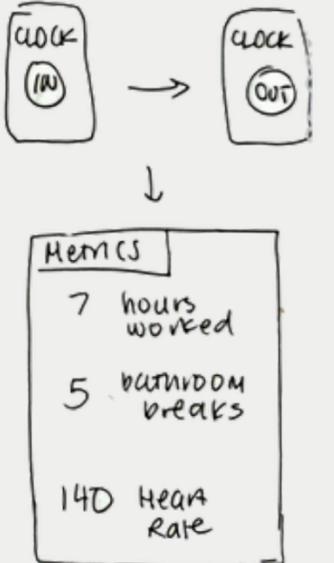
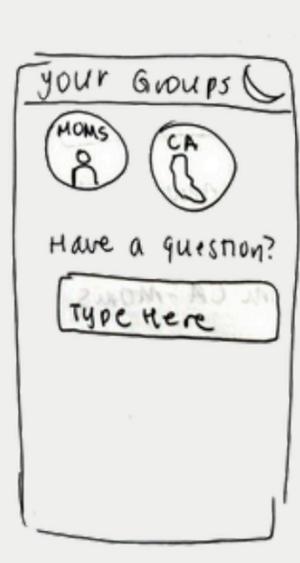
Concept Sketches

1

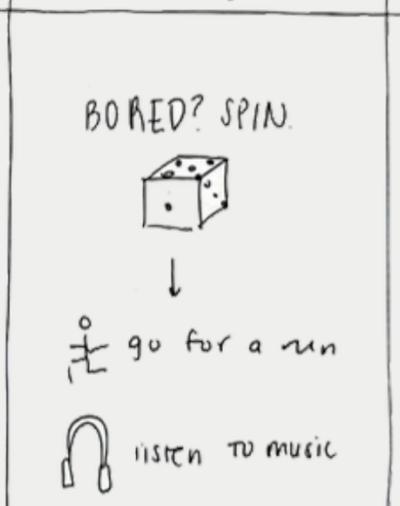
Concept Sketches



- TASKS
- Solution
 - Solution
 - cake
 - Safeway
- from new moms support group

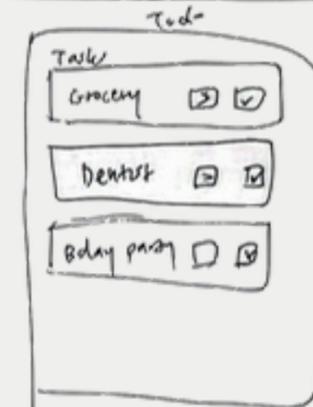
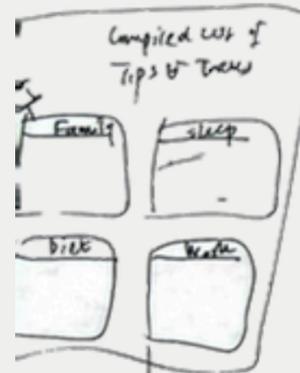
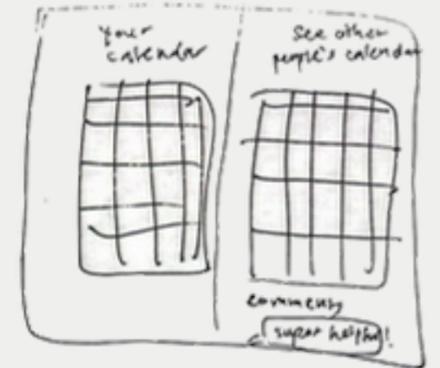
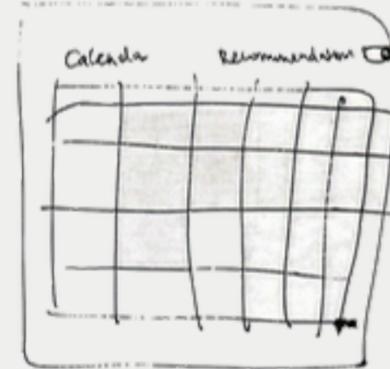
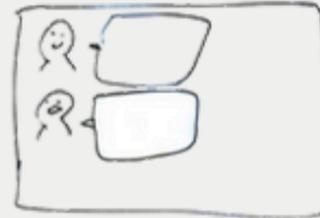
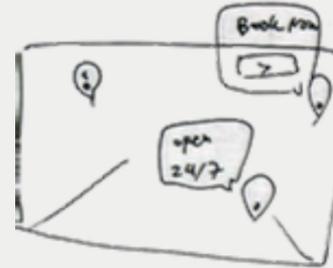
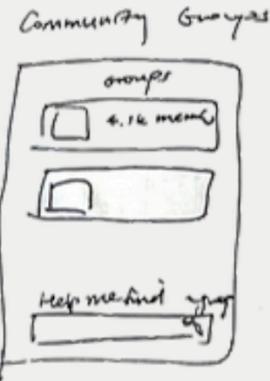
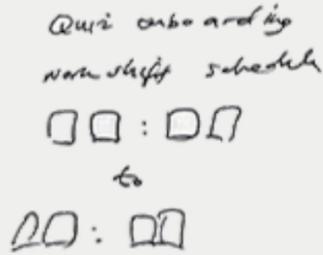
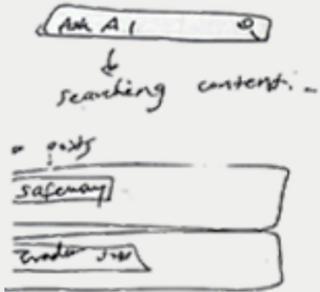
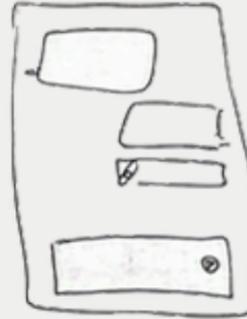
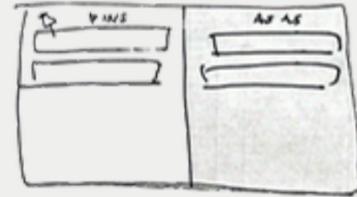
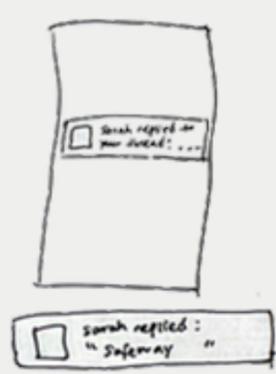


- Need help?
- ↳ from new-moms
 - ↳ from CA-MOMS
 - ↳ from general



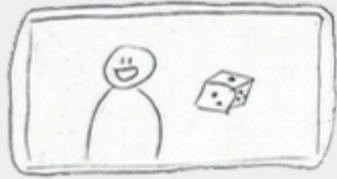
- Your Profile
- ♀ woman
 - 🍷 bartender
 - 👶 has kids

Concept Sketches

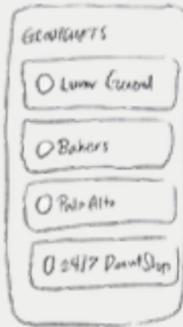


Concept Sketches

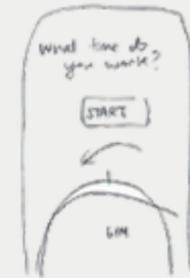
AR GAMES w/ CARDS



VR INTERACTION



ONBOARDING INTERACTIVE



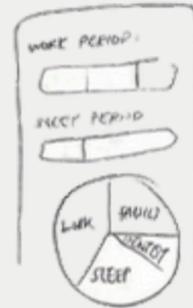
JOURNALING



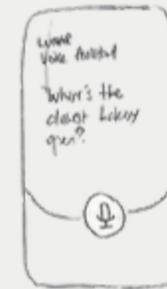
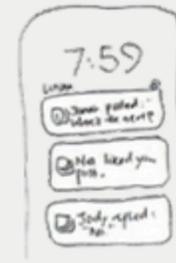
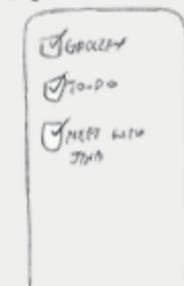
TIPS BOARD



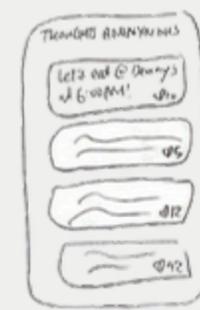
DREAM SLEEP SCHEDULE



DAY TASKS



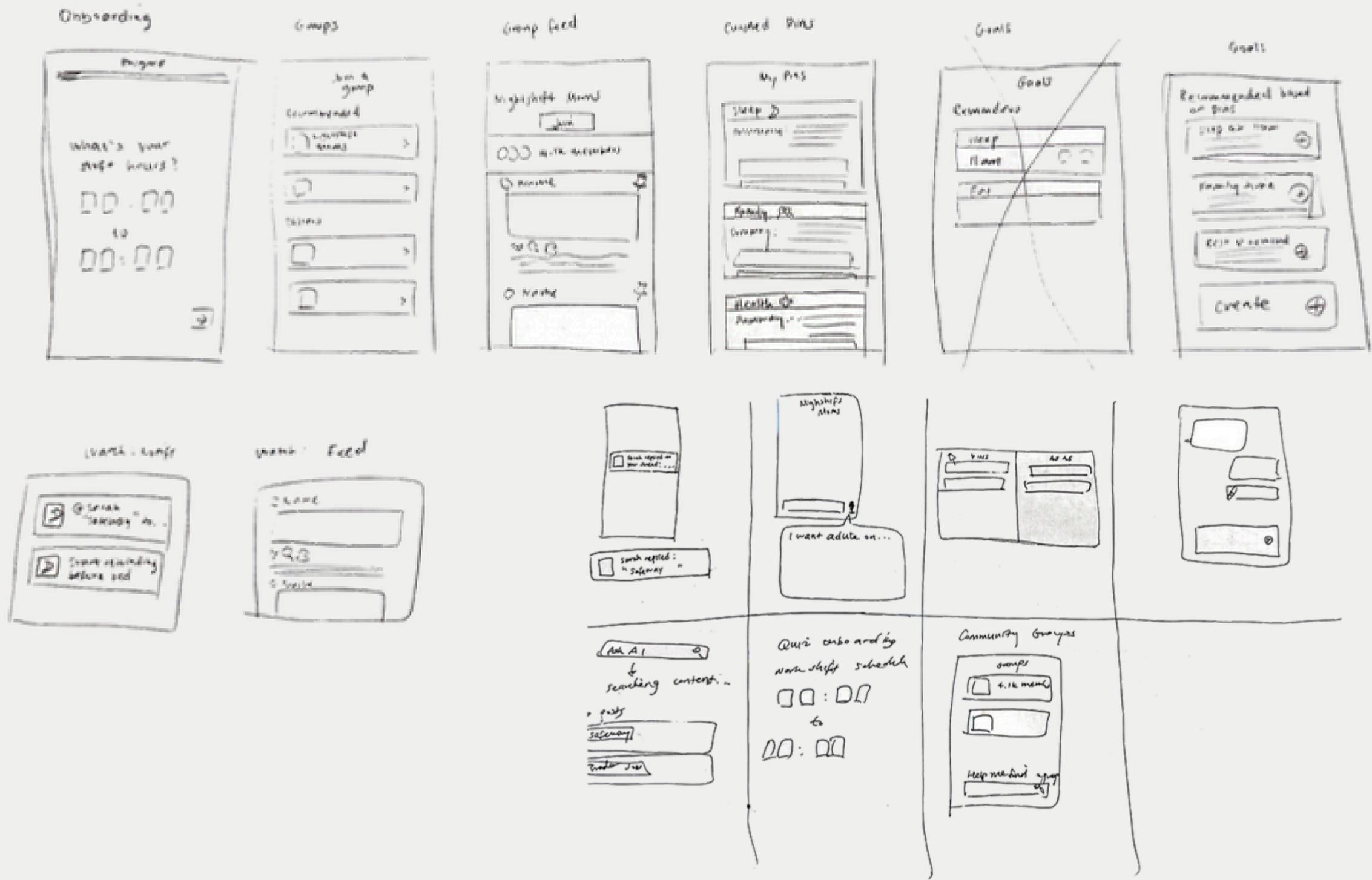
NIGHT SHIFT MEDIAN GO



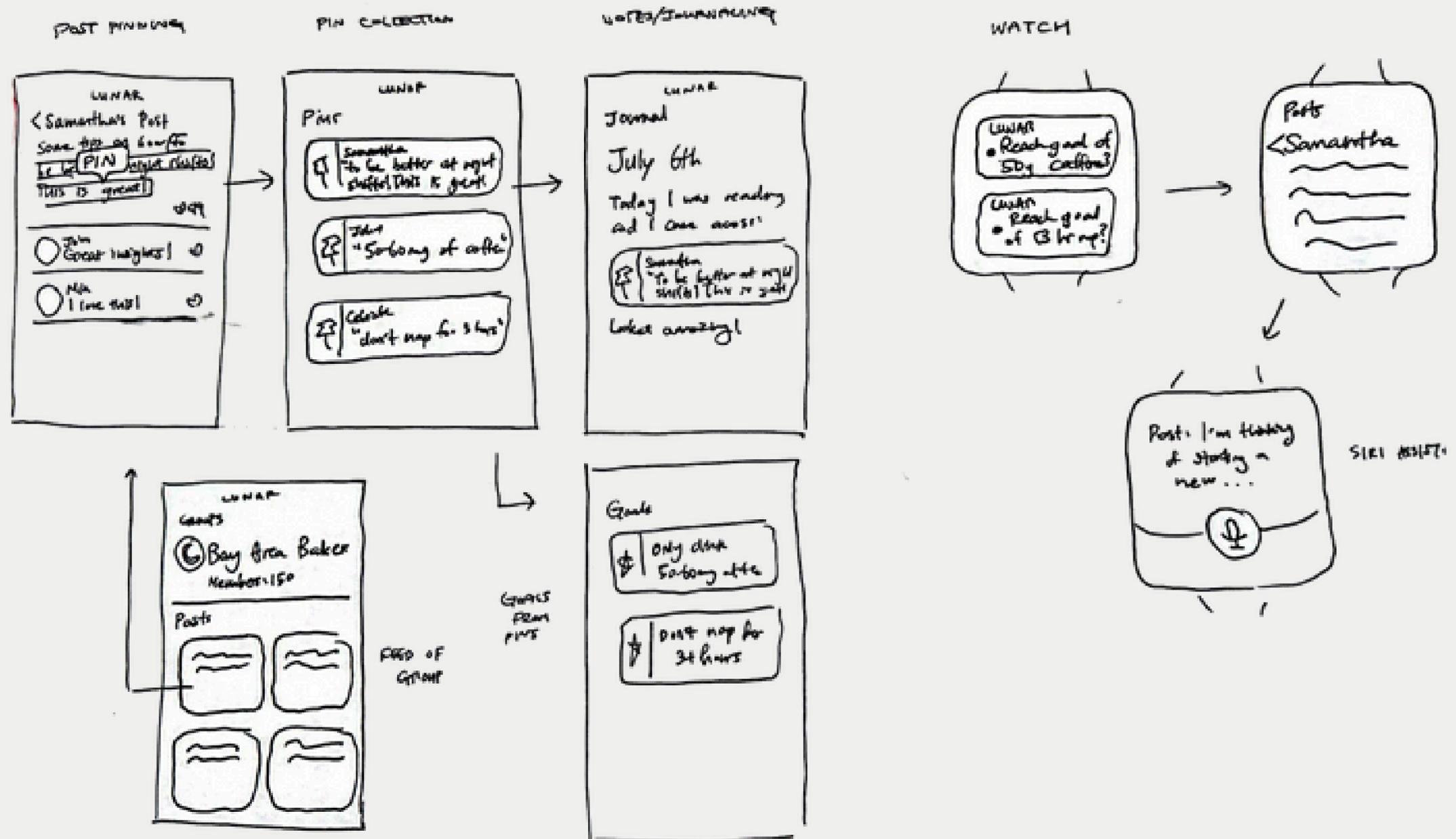
MAP FEATURE



Final Realization Sketches



Final Realization Sketches



Realization #1: Mobile App

REALIZATION #1: MOBILE APP

Onboarding

Progress

What's your shift hours?

□□:□□
□□:□□

Groups

Join a group

Recommended

- Nightshift moms
34 members >
- >
- >
- >
- >

Group feed (posts)

Nightshift MOMS

34 members

Name

Name

+ (add)

Create a Post

Create a Post

My name

Type here

keyboard

Pins

My Pins

- Sleep
summary: >
- Family
summary: >
- Health

Goals

Goals

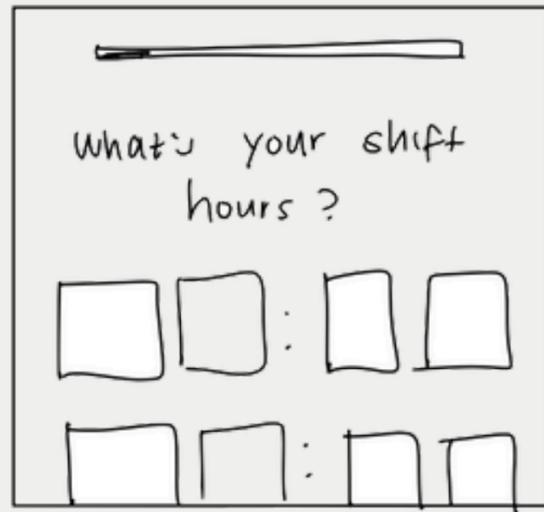
Recommended based on pins

- sleep at 11am +
- Family time 3pm +
- Rest & recover +
- Create +

Realization #2: Apple Watch

REALIZATION #2: APPLE WATCH

onboarding



What's your shift hours?

□ □ : □ □

□ □ : □ □

GROUPS

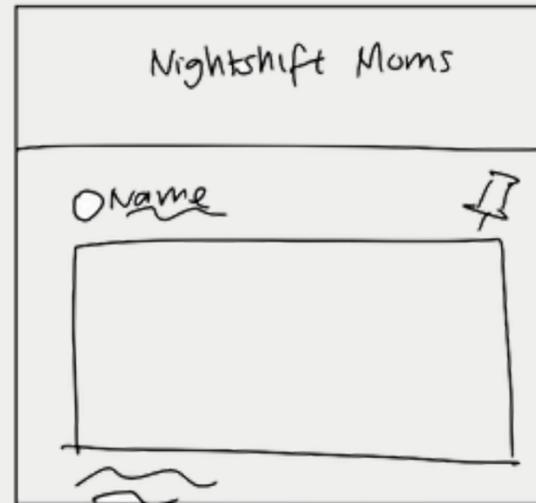


Join a Group
Recommended

□ Nightshift Moms >

□ ~ ~ >

Group feed

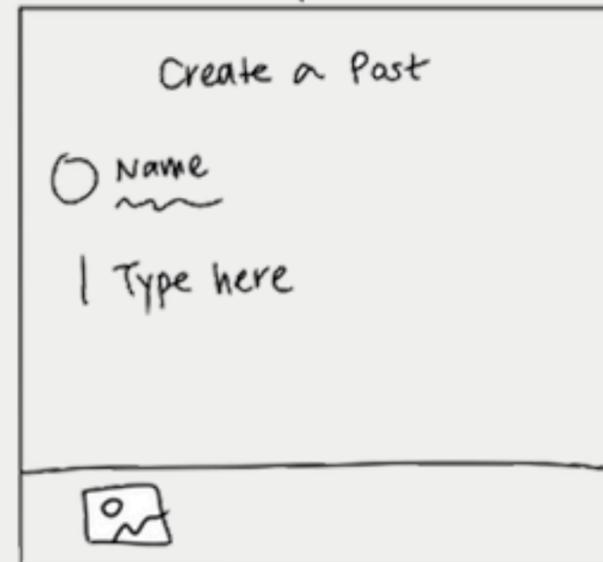


Nightshift Moms

○ Name

□

Create a post



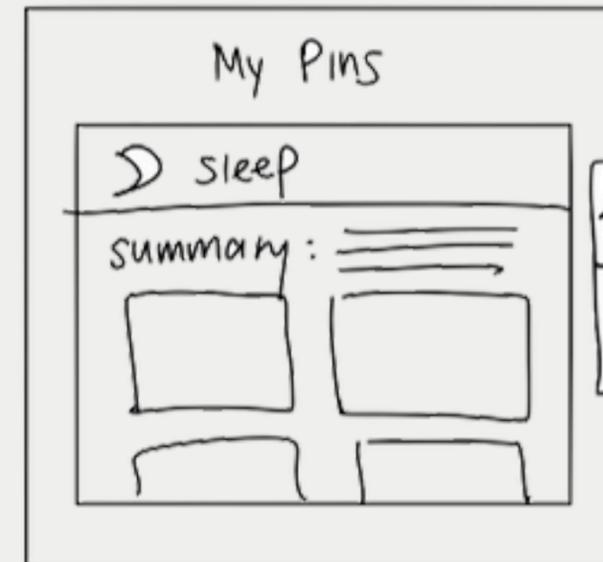
Create a Post

○ Name

| Type here

□

PINS



My PINS

☞ sleep

summary: _____

□ □

□ □

Goals



Goals

Recommended based on pins

Sleep at 11am (+)

Family time 3pm (+)

Selected Solution



2

Realization #1: Mobile App

Pros

- **Rich Information Density:** Summaries, goals, and posts to be visible at once
- **Greater Flexibility:** Larger screen offers more room for customization and more features (E.g. adding and editing pins, creating detailed posts)
- **Better User Input Capabilities:** Typing is easier on a mobile app due to the presence of a full keyboard. This makes it ideal for detailed posts or more complex inputs
- **Enhanced Visualization:** Pins, groups, and goals have ample space to showcase graphics, summaries, and more visual elements that help users process the information quickly.
- **Multi-Tasking Potential:** Users can navigate between different parts of the app, such as onboarding, group feeds, and goals.

Cons

- **Bulkier Experience:** The mobile app might require more time and attention from users, which can be less convenient during quick tasks or while multi-tasking (such as during a shift).
- **Battery and Storage Considerations:** Constant interaction with a mobile app could drain battery life and require more storage, which may be a concern for users already juggling shift work.
- **Less Wearable and Accessible:** Mobile phones are more cumbersome to access on the go compared to wearable devices like a watch.

Realization #2: Apple Watch

Pros

- **Quick Access:** The Apple Watch interface allows users to quickly access important information (like group updates or shift hours) without having to pull out their phones, ideal for people on-the-go during night shifts.
- **Wearable Convenience:** Since the watch is worn at all times, users can easily check notifications or reminders at a glance, increasing accessibility in a hands-free, mobile format.
- **Simplified Interface:** The more compact UI ensures that only the most essential information is shown, reducing cognitive load, which is ideal for busy users.
- **Health and Fitness Integration:** The Apple Watch's focus on health-related features (like tracking heart rate, sleep, etc.) fits well with the nightshift workers' health needs.

Cons

- **Limited Interaction and Input:** Creating a post could be challenging on a small Apple Watch screen. It's not ideal for tasks requiring more text or detailed input, such as writing group posts or summaries.
- **Reduced Content Visibility:** Due to smaller screen size, users might need to scroll more to access information, limiting the amount of content that can be shown at once.
- **Lack of Access:** Not every night shift worker owns a smartwatch, and would be associated with night shift workers that have enough money to afford one.
- **Dependency on Mobile for Complex Tasks:** The watch interface might still require users to switch to their phone for more complex tasks, limiting the device's overall usefulness in certain scenarios.

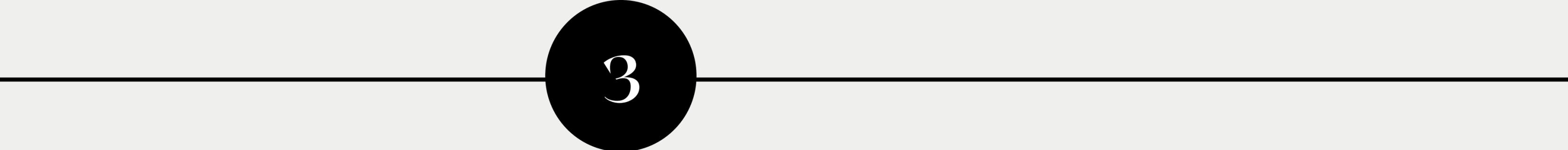
Mobile App

We chose to design a mobile app for our solution based on our **user base's needs** and **good design principles and practices**

Why Mobile App?

- **More Information Displayed:** Displays detailed summaries, multiple pins, and goals at once (less scrolling required)
- **Ease of Input (Typing):** Full keyboard allows for easier creation of posts and interaction in groups.
- **Flexible Features:** Better for navigating different sections and managing content.
- **Customization:** Offers more options for personalizing the user experience.
- **In-Depth Use:** Ideal for longer engagements and managing complex tasks.
- **Clear Visuals:** Displays complex visuals and information clearly (e.g. screenshots of people's calendar, websites linked from posts)

Task Flows



3

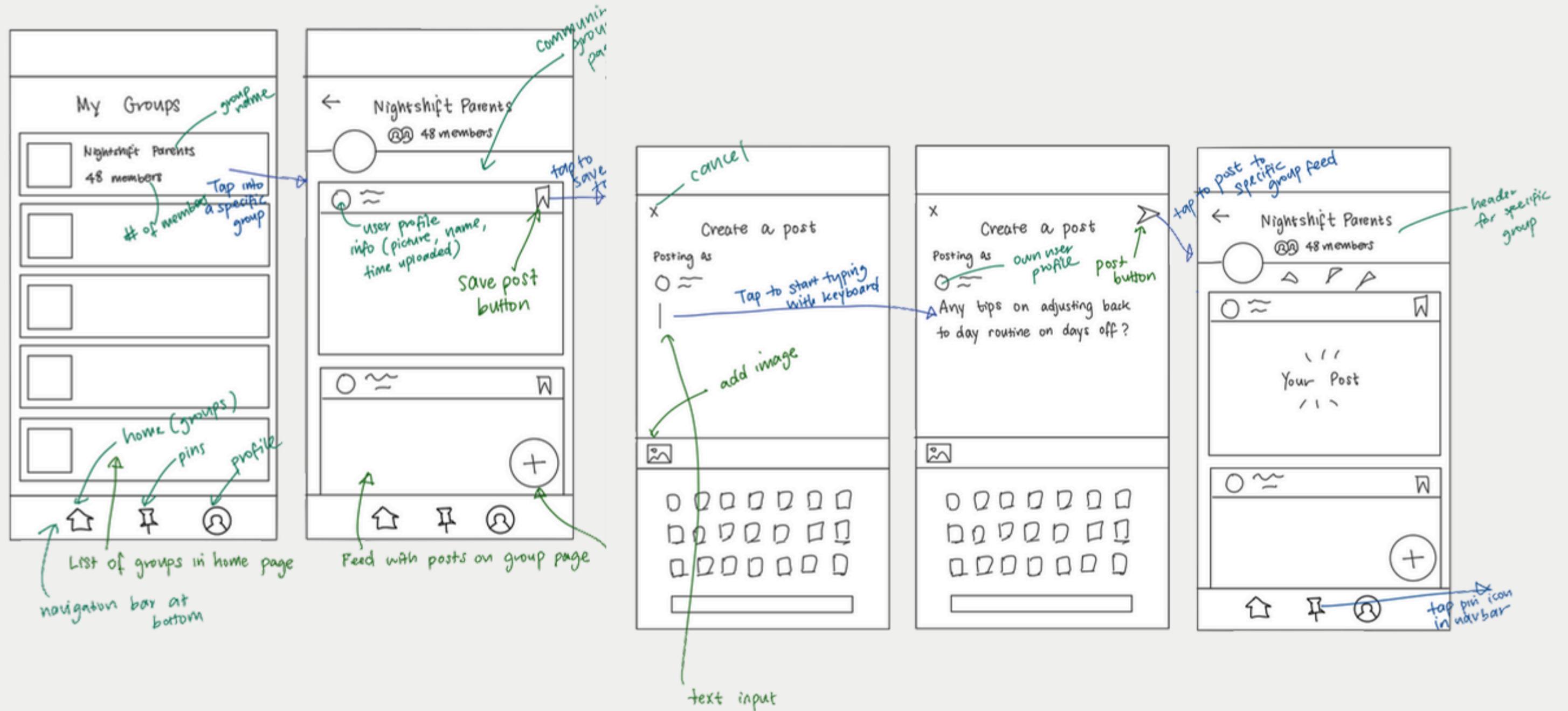
Simple Task

Viewing relevant community post groups and asking questions within them



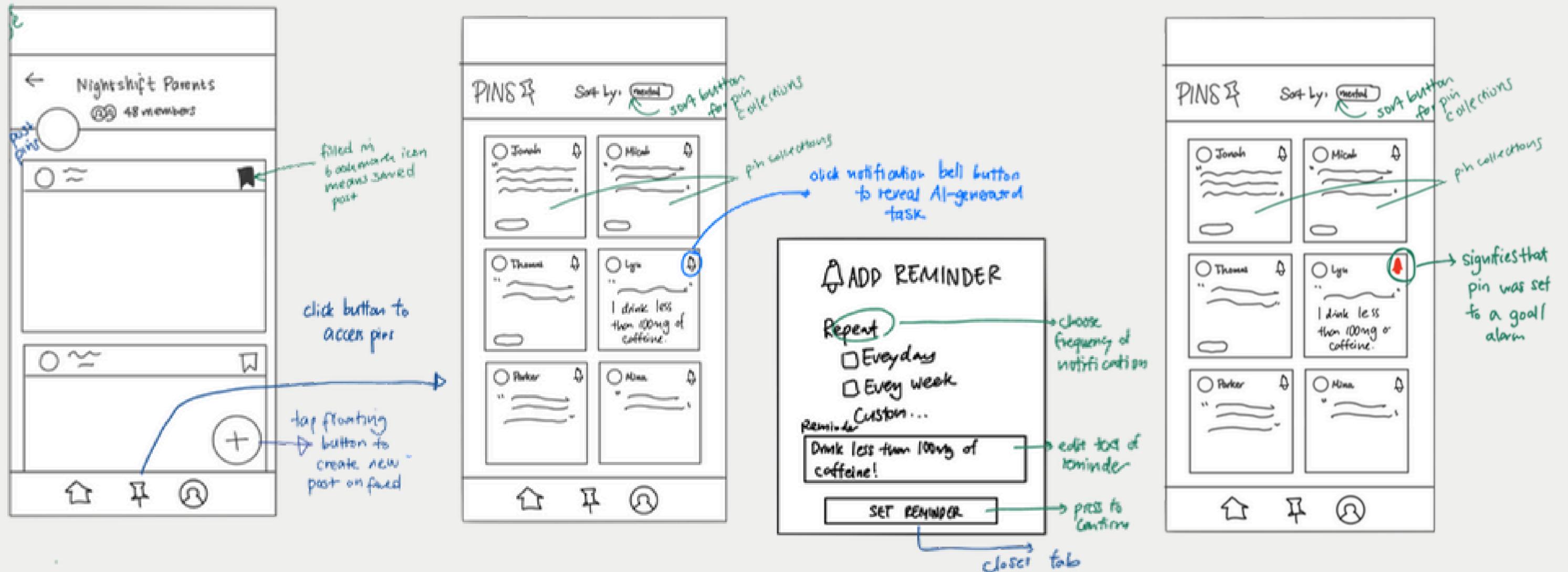
Moderate Task

Actively contributing to community forums and answering questions



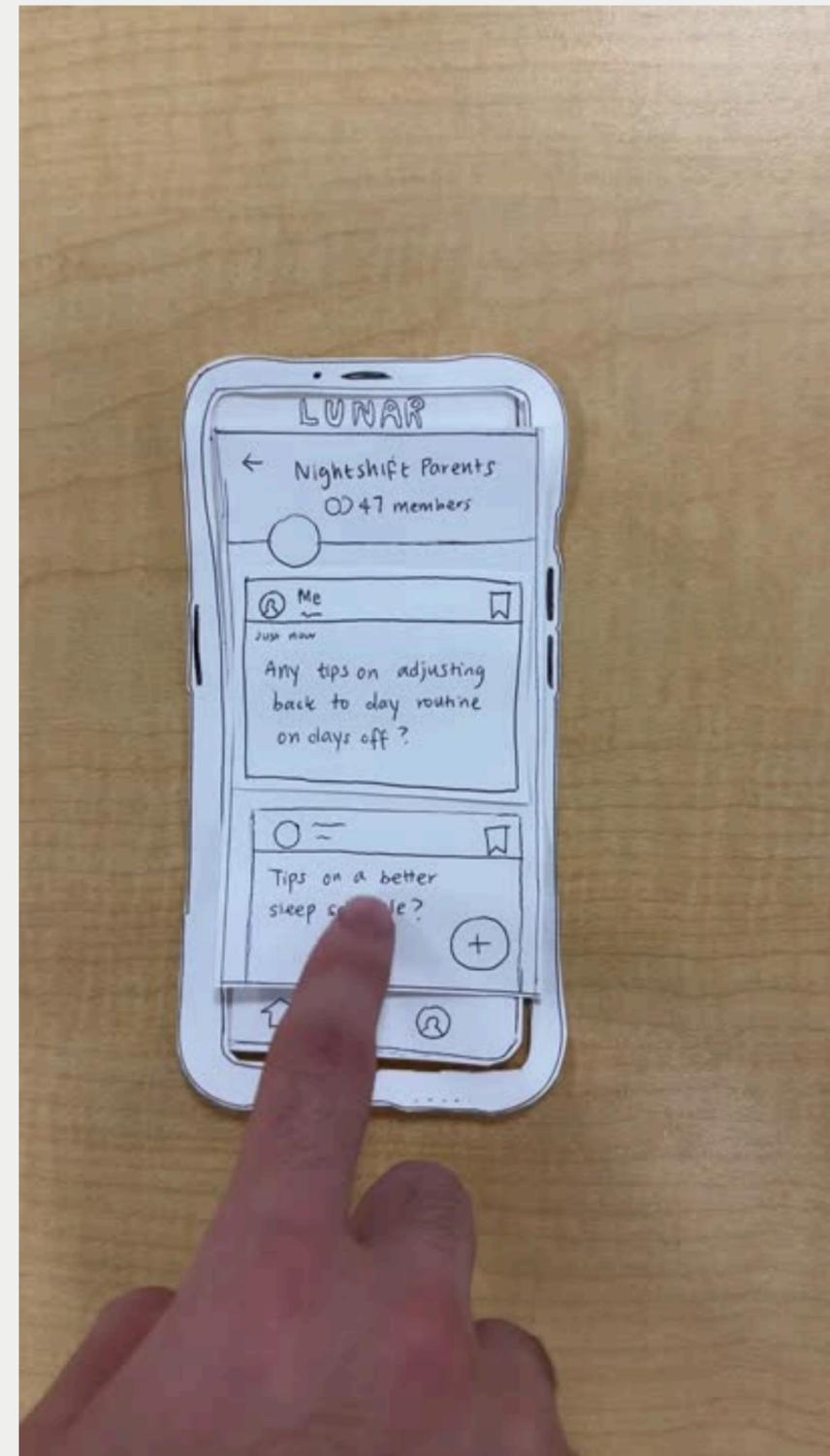
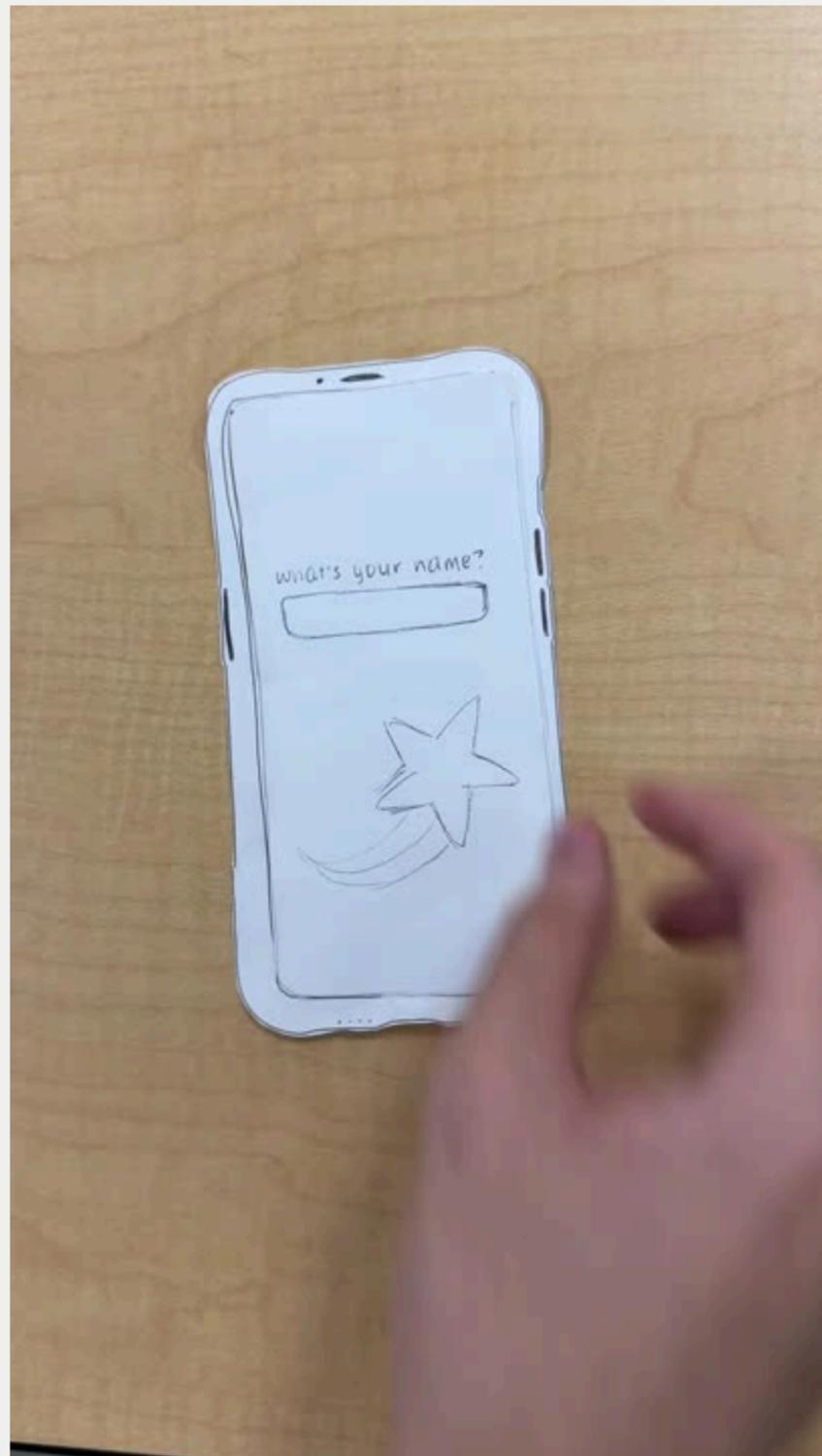
Complex Task

Taking action to book and pin specific tips (add to calendar, call service, etc)



Low-Fi Prototype

4



Prototype Tests

5

Pre-Testing Preparation

Usability Goals

- 1. Efficient App Navigation:** Used objective metrics on time it took to complete each task, and subjective metrics on how easy they thought the navigation was
- 2. Commission of Fewer Errors:** Used objective metrics on number of errors
- 3. Greater Pleasure or Satisfaction:** Used subjective metrics through survey responses and conversation

Script and Test Log

- Wrote **script for test procedure**, facilitator and notetaker role (took turns), overviewed each task and **emphasized talking out loud (on-site)**
- Noted each **critical incident**, divided them into a scale of 0-4 depending on severity

*full details in appendix

Lunar Paper Prototyping Post Survey

[Sign in to Google](#) to save your progress. [Learn more](#)

It was easy for me to...

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
navigate to a group.	<input type="radio"/>				
navigate to my pins.	<input type="radio"/>				
navigate "create a post" button.	<input type="radio"/>				
navigate comments/responses in a single post.	<input type="radio"/>				
find and join a group based on interests and needs	<input type="radio"/>				
The overall navigation and flow of the app was intuitive.	<input type="radio"/>				

Are there any sections of the app where you felt lost or unsure of what to do next?

Your answer _____

Were there any features of the app you liked or disliked?

Your answer _____

What did you want to see more of?

Your answer _____

Pre-Testing Preparation

Testing Roles



Notetaker



Facilitator



**Computer/
Notetaker**



Facilitator

Deputy Emerson

Stanford Police Department Deputy Sheriff

Test Log Summary

- 0 • General user flow, **intuition of buttons to press to navigate**
- 0 • Suggested integration with smart watch
- 0 • Selected “never” to share location
- 1 • **Sometimes clicked back to main page**, when direct navigation was possible
- 1 • “USA” location was already populated but was prompted again
- 2 • Options for self-classification didn’t really apply to him
- 2 • Would **prefer not to have to scroll through every post** (upvote feature)
- 3 • “Posting schedule” auto generated the rest of his schedule without prompt
- 3 • **Unsure of how often he’d refer back to the app** after initial knowledge gain
- 3 • Critical user base difference: those seeking community, those seeking tips
- 4 • Unsure how to **narrow down group assignments without too much onboarding friction**
- 4 • Fundamentally **“not an app person”**. Would use reminder integrations (e.g. with smartwatch) more



Deputy Emerson

Stanford Police Department Deputy Sheriff

Objective Metrics

Simple Task

- Task Time: 1:16 (low)
- Number of errors: 1 (low)

Moderate Task

- Task Time: 1:10 (avg)
- Number of errors: 2 (avg)

Complex Task

- Task Time: 0:48 (avg)
- Number of errors: 3 (high)

Subjective Metrics + Summary

- Thought UI flow **generally made sense**, had no trouble navigating to pages based on icon representations
- Was **confused on some integrated posting features**: for example, uploading a schedule didn't prompt him to input his entire schedule outside of work hours
- Thought having to scroll past every post chronologically was tiresome: would prefer some **crowdsourcing upvoting method**
- Identified different applications of the app: he personally wouldn't use it that much, but **lonely night-shifters in isolation might**
- Fundamentally not an app person. Would like to see it **more integrated** into his existing workflow.

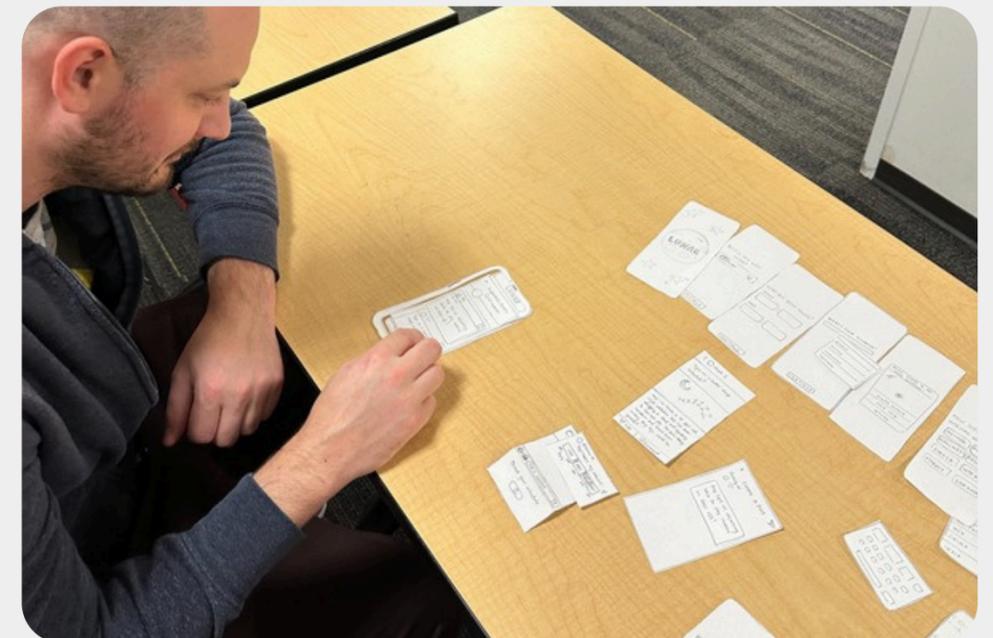
*See appendix for full details

Dr. James

Stanford Hospital Physician

Test Log Summary

- 0
 - Flow of onboarding / getting started with app was easy and intuitive
 - Navigating group feed (similar to platforms like Reddit)
 - Create a post
 - Scrolling to see additional information, more posts etc.
- 1
 - Navigating to different screens in navigation tab (took a second to find pins)
 - Selecting different interest groups to join
 - Commenting/replying to a posts
- 2
 - N/A
- 3
 - Was expecting a back button but couldn't find one (had to use navigation tab to switch screens instead)
- 4
 - **Unsure of where to find "share calendar" button and what this would upload (screenshot, google calendar sync? etc)**



Objective Metrics

Simple Task

- Task Time: 1:42 (avg)
- Number of errors: 0 (low)

Moderate Task

- Task Time: 1:20 (low)
- Number of errors: 2 (low)

Complex Task

- Task Time: 0:47 (avg)
- Number of errors: 3 (high)

Subjective Metrics + Summary

- Onboarding (answering basic background questions) was straightforward and intuitive
- **Navigating feed and posts** on community groups **felt familiar** (user was familiar with similar community platforms like Reddit)
- Took a second to **find “pins” screen in navigation tab. Wished there was a back button** instead of only using navigation tab
- Would like **pins to be organized/sorted** into customizable collections or boards so it's easier to later search for them
- Creating a post felt intuitive and familiar
- **Confused about where to find, use case, and media type for the “share calendar” button feature** (screenshot, google calendar sync? etc)

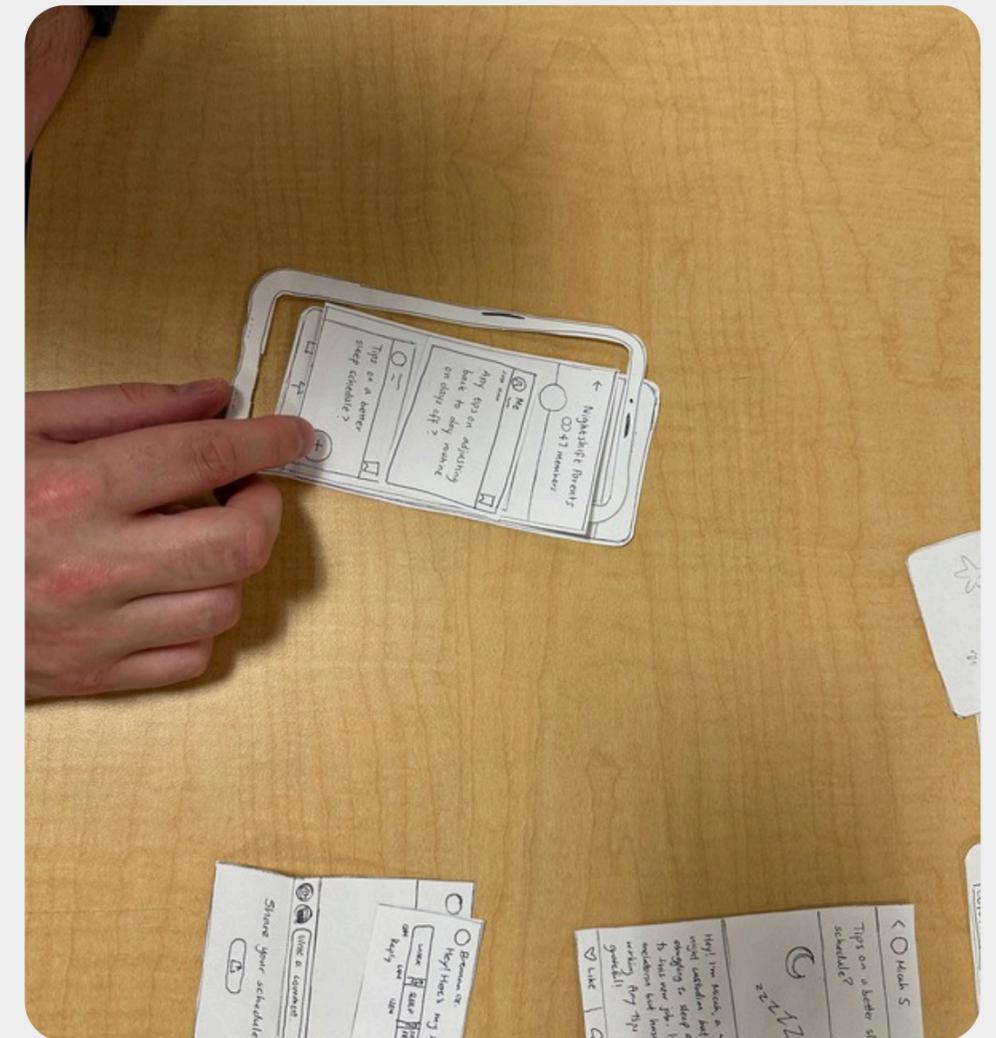
*See appendix for full details

Steven

Worked Previous Night Tutoring Shifts

Test Log Summary

- 0
 - Liked the design and thought that it was in line with the product
 - Expressed enthusiasm at the benefit for the users, especially for users who were working full-time
- 1
 - Got confused as to why it was important to list their occupation
- 2
 - Flagging when you're on a post and clicking and reading it
 - Generally understood the flow of the onboarding process though recognized that the steps seemed arduous and unnecessary
- 3
 - **Found that longer onboarding created friction**
 - **Took a while to navigate to the "saved" pins section as the emblems were different**
- 4
 - **Plus looks like its adding to a specific post versus putting it on the home page**



Steven

Worked Previous Night Tutoring Shifts

Objective Metrics

Simple Task

- Task Time: 1:21 (low)
- Number of errors: 1 (low)

Moderate Task

- Task Time: 1:10 (avg)
- Number of errors: 1 (low)

Complex Task

- Task Time: 0:42 (avg)
- Number of errors: 3 (high)

Subjective Metrics + Summary

- Thought there was **toomuch friction in the onboarding process**, though the design was aligned well with product
- Thought that **prompt to list occupation had no clear motivation** in onboarding
- Was **confused why the pin and the flag were different emblems** if they represented the same function
- Thought that users should be able to **flag posts while navigating** through a specific post
- Was **confused about the “+” button and its functionality** (whether it was adding a new post or adding to the existing post that the user was looking at)

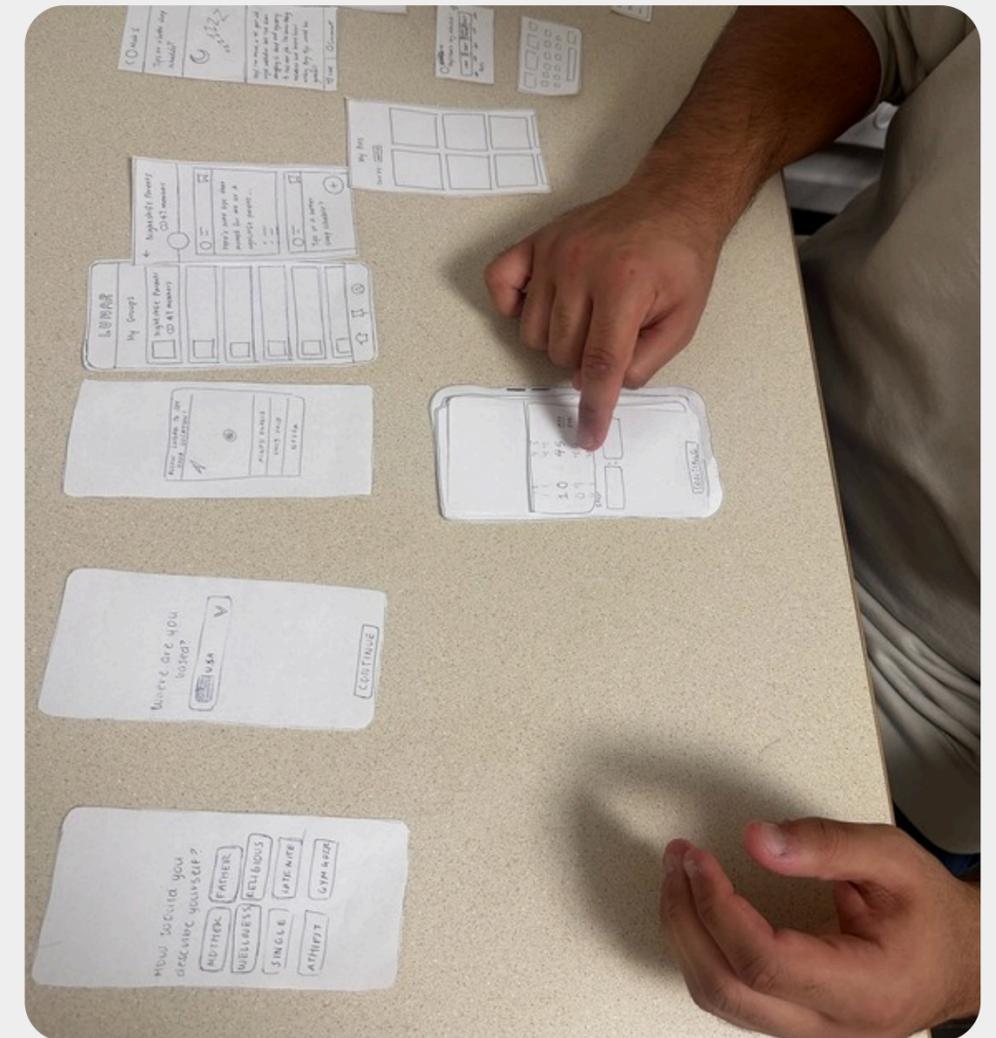
*See appendix for full details

Rahul

RD&E Night Shift Worker

Test Log Summary

- 0
 - Quickly found essential features, such as pinning/saving
 - Smooth and streamlined onboarding process, intuitively knew whether to select vs. type
- 1
 - No button to post when finished writing out the text
 - **Asked if he could post to multiple groups, and do it anonymously**
- 2
 - Wanted more options more classification, or an “other” section
 - **Tried to filter/search to see posts (like the pin filter), but couldn't**
- 3
 - Adding the reminder was not as intuitive, such as selecting the time (thought something could've been better than a checkbox)
 - Had trouble figuring out how to edit the reminder
 - **Asked “is there a place where I can see all the reminders?”**
- 4
 - **He couldn't find how to add a reminder for quite a while, said the button was too small**



Objective Metrics

Simple Task

- Task Time: 1:34 (low)
- Number of errors: 1 (low)

Moderate Task

- Task Time: 1:42 (avg)
- Number of errors: 4 (high)

Complex Task

- Task Time: 1:40 (avg)
- Number of errors: 3 (high)

Subjective Metrics + Summary

- Thought the interface was **easy** and **quick to navigate**
- Several confusing buttons such as the pin/save (obvious yet confusing) and the reminder
- Rated **strongly agree** or **agree** for most of the survey responses (except for adding a reminder), found it easy to use
- Had some stronger opinions regarding some of the **features** he wanted to see:
 - Wanted an **anonymous feature** because sometimes he wants to “rant” about his work and find support
 - Potentially a way to verify to prevent **trolls**
 - Wanted a feature where he can ask people for help (ex. set up a dentist appointment)

*See appendix for full details

Discussion

Implications

- 1 Lunar would be most helpful for those **newly transitioning to night shifts** or **isolated workers looking for community**. For night-shifters outside of these categories, it may not be as useful to refer back to as often (less engagement)
- 2 Overall **flow of sub-tasks** such as onboarding, locating group feed, and creating a post **felt familiar and intuitive** since they were **similar** to popular community platforms like Reddit (low error count)
- 3 Lunar could improve clarity of certain **navigation elements** such as making the **navigation tab** at the bottom more clear, **adding a back, cancel, or exit button** to undo actions.
- 4 Users strongly care about a **sense of trust and privacy**. They want **companionship** and support among night shift workers, offering a **safe space** where users can connect, vent, and seek help (features such as **anonymous interactions, task assistance/request**)

Future Design Changes



Features to Keep

- Bookmarking option and ability to **pin specific posts**
- Onboarding process, but simplify + specify
- Being able to see an expanded view of a specific post
- Pinned posts page but with increased customizability
- **General UI flow** and icons used -- made sense to all testers



Features to Change

- Combine **“pinning”** and **“bookmarking”** into one feature to make clear
- Include crowdsourced upvoting to prevent extended scrolling
- Ensure that **“+” create post button has high contrast** with existing posts and is not contained into a specific post (e.g. by adding shadow to give a floating effect)
- **Clarify purpose of the app in onboarding (be transparent)** before collecting so much data about the user
- Allow bookmarking when a post is expanded instead of only on minimized version

Limitations

Was there anything that the testing couldn't reveal?

1

Although we were able to gauge users' initial impressions of our project, this is not indicative of **long-term use** and behaviors of the actual app. For example, how **often** a user would post or return to a post.

2

We had features such as swiping up on a specific post which expanded a view or sharing elements, and those cannot **replicate the nuances** of a real touch gesture on the phone.

3

Although we introduced the idea of integrating with user's **calendar or reminders**, we were not able to test follow-through with those integrations or evaluate **how helpful** they actually were within our user's workflow.

Appendix

List of Pros and Cons

Low-Fi Prototype Videos

Interview Script + Critical Incidents Log

Post-Interview Form

That's a wrap!

Thank you for
listening.