

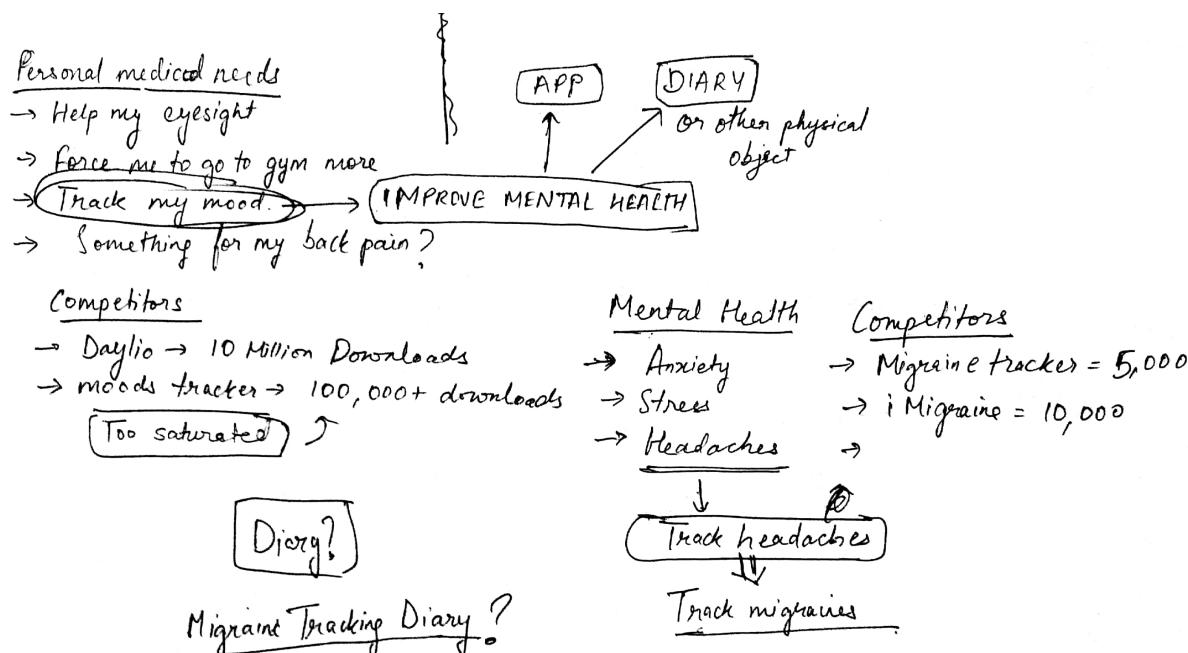
# Headsup: A bullet journal to track your migraines

In this case study, I'll go over the processes that I followed to complete this design challenge, and explain my reasoning behind the design decisions that I took. I'll illustrate my process in form of visual diagrams wherever I can, so it is easier for the reader to skim for information.

## Ideation

After reading the prompt, I started jotting down some personal medical needs that I wanted technology to solve. I came up with an idea to track my mood swings so I can take better care of my mental health. Upon a simple online search, I found a plethora of established apps that were already doing this. I wanted something a bit more niche.

My next idea was to track migraines and headaches. I found a handful of apps. I spent a while using them and tried to understand the value they provided to migraine patients. I formed a hypothesis that tracking migraines was important to people suffering from them and decided to research more.



# Research

Before I could start solving anything, I wanted to know if I was solving the right problem. To find more information about migraines and its treatment, I separated my research into three parts:

1. Look for rationale information and get to know about migraines and migraine diaries
2. Talk to a person who is affected by migraines and ask about her or his experience
3. Talk to a neurology physician who works with patients affected by migraines and learn how they build a treatment plan for them

## Rationale Information

Migraine is a neurological condition that causes severe, recurring, and painful headaches. About a billion people suffer from migraines (roughly 15% of all population). Migraines are believed to be mostly hereditary with 73% of patients having a family history with the disease.

Living with migraines is an exercise in coping with the unpredictable. Symptoms and severity can change from one attack to the next. Frequency fluctuates. Medications stop working. The disease rarely presents in exactly the same way for two persons. The Migraine Trust advises patients to keep a migraine journal to help them recognize trigger factors and warning signs.

## Interview with a Patient

I interviewed Swati Yadav, who has been suffering from migraines for the past 6 years. When Swati's migraines started, she was not satisfied with her medication plan. The medicines that her doctor had prescribed her would give her moderate relief but as soon it wore off, she would feel even sicker than before.

Swati started maintaining a migraine diary where she would jot down everything that she remembered that led to the attack. After a while she noticed common occurrences of her drinking more than 3 cups of tea a day and having a severe migraine the same day. She found that excess caffeine could be a trigger for some people. Turns out her prescribed medicines had cocoa as one of its ingredients and was the reason she would feel terrible after a moderate interval of relief.

Swati also told me that she had never used an app to record her attack because writing on paper was faster for her than using a keyboard.

## Interview with a Physician

I met with Dr Anjana Singh, a neurology physician who has been practicing for the last 10 years. When I asked her about caffeine being a trigger, she told me how tea helped some of her patients relax while it was a triggering factor for others. She also told me that for some people, variations in their daily schedule like skipped meals and irregular sleep could stir up anxiety and eventually lead to a migraine. She recommends patients to recognize and avoid anxiety inducing situations in their life to better cope with migraines.

Through the interview, I got to know how everything about migraines was unpredictable. I learned how triggers could vary from person to person, and minute changes in their surroundings would affect the severity of their headaches.

## Key Learnings from Research

1. People journal their migraines to recognize triggers and avoid them. Triggers could vary from person to person making it all the more important to find them from your personal experiences. This validated my initial hypothesis that journaling migraines was important for people suffering with it.**2.** Talk to a person who is affected by migraines and ask about her or his experience
2. Migraine is most common in the 35-45 age group. People in this age group aren't always comfortable with typing on a keyboard and would rather write in a physical diary than on their phone's notes app.

## Mission and Goal

After summarizing my research, I started to think what kind of experience I wanted to create. I settled on a bullet journal mobile app that would allow users to record migraines without needing to type. I set a mission and a few goals that I would follow while crafting this app.

# Mission

Help migraine patients decrease the severity of their attacks and lead a better life

## Goals

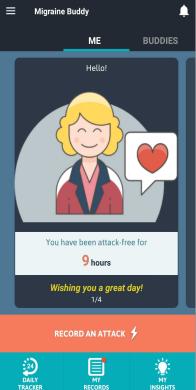
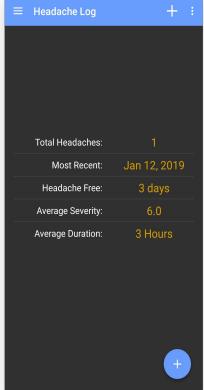
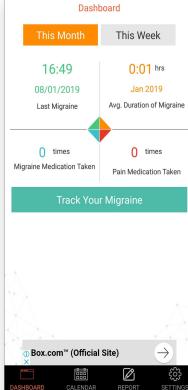
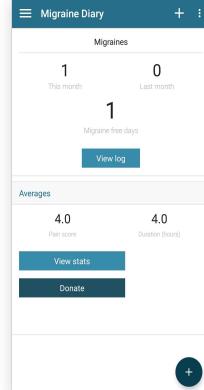
Design an experience for migraine patients to help them record their attacks without needing to type.

Help patients build an appropriate treatment plan by assessing what factors trigger their migraines.

Encourage patients to share medical reports with their physicians to help them make a firm diagnosis.

## Competitive Review

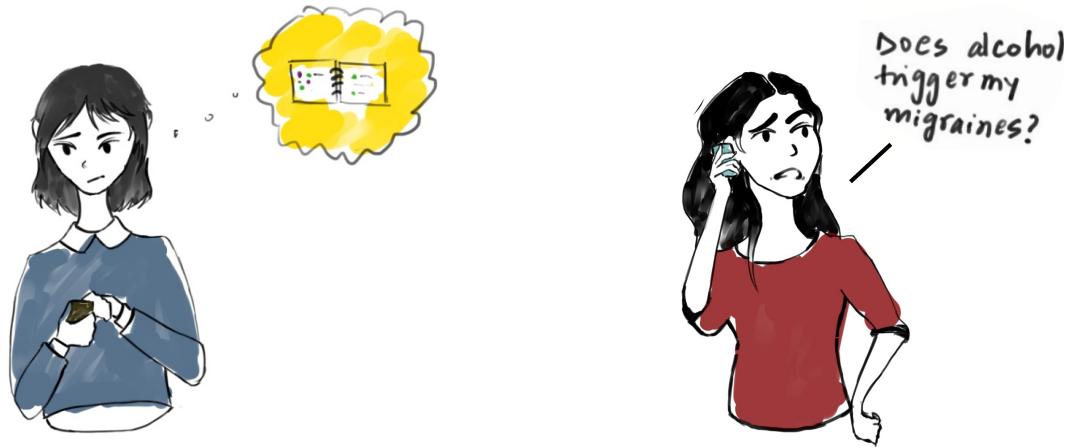
Working on a completely new concept is rare—there's usually someone out there doing something similar even if it's not directly competing. So I looked up 5 most relevant migraine tracking apps to see how they were solving the problem.

				
Migraine Buddy 1 Million	Migraine Monitor 10,000	Headache Log 5,000	iMigraine 5,000	Migraine Diary 1,000

All of these apps were clunky, dated and overloaded with information. I found that most of these apps were built by hospitals to help their physicians better diagnose their patients.

# Personas

I had gained a lot of insights by talking to Swati, but I did not want to base my personas on just her. To research more about user needs, I went to The Daily Migraine, a blog where people talk about living with migraines and how it affects their career and social life. Reading those perspectives helped me create two personas.



## Alisha Cheung

- 31 year old financial analyst.
- Carries medicines everywhere she goes since an attack can strike her anywhere.
- Maintains a physical diary to note down her attacks.

### PAIN POINTS

- Forgets her diary at home and forgets to note down her migraine.
- Notes down her migraine on her phone when diary is not near but finds it very tiresome.

### NEEDS

- Looking for a simple tracking tool that helps to cut down unnecessary time and effort.
- Looking to find out if her menstruation cycle coincides with her attacks.

## Neena Singh

- 42 year old freelance illustrator.
- Doesn't know about her triggers. Doctor has recommended her to start noting down her attacks.
- Looking to start maintaining a migraine diary.

### PAIN POINTS

- Is not able to pinpoint her triggers from her diet.
- Migraines usually happen after a nightout but she isn't sure if the alcohol or the greasy food is causing it.

### NEEDS

- Looking for a way to note down possible triggers when a migraine happens.
- Looking to find out if her menstruation cycle coincides with her attacks

# Job Stories

Based on Alan Klement's concept of Jobs to be done framework, I thought about different contexts in which a user would use the app. This would help me understand users' behaviour, motivation and what outcome they expect from the app.

<u>Situation</u>	When I'm <u>having a migraine</u> , I want to <b>record it in a journal</b> , so I <u>can report it to my doctor</u> .
<b>Motivation</b>	
<u>Outcome</u>	While I'm <u>recording a migraine</u> , I want to <b>record my triggers</b> so I can <u>avoid them in the future</u> .
	While I'm <u>recording a migraine</u> , I want to <b>record my medication plan</b> , so I can <u>assess what medicines work for me</u> .
	After <u>I'm done recording a migraine</u> , I want to <b>send my migraine report to my doctor</b> , to <u>help them make a firm diagnosis</u> .

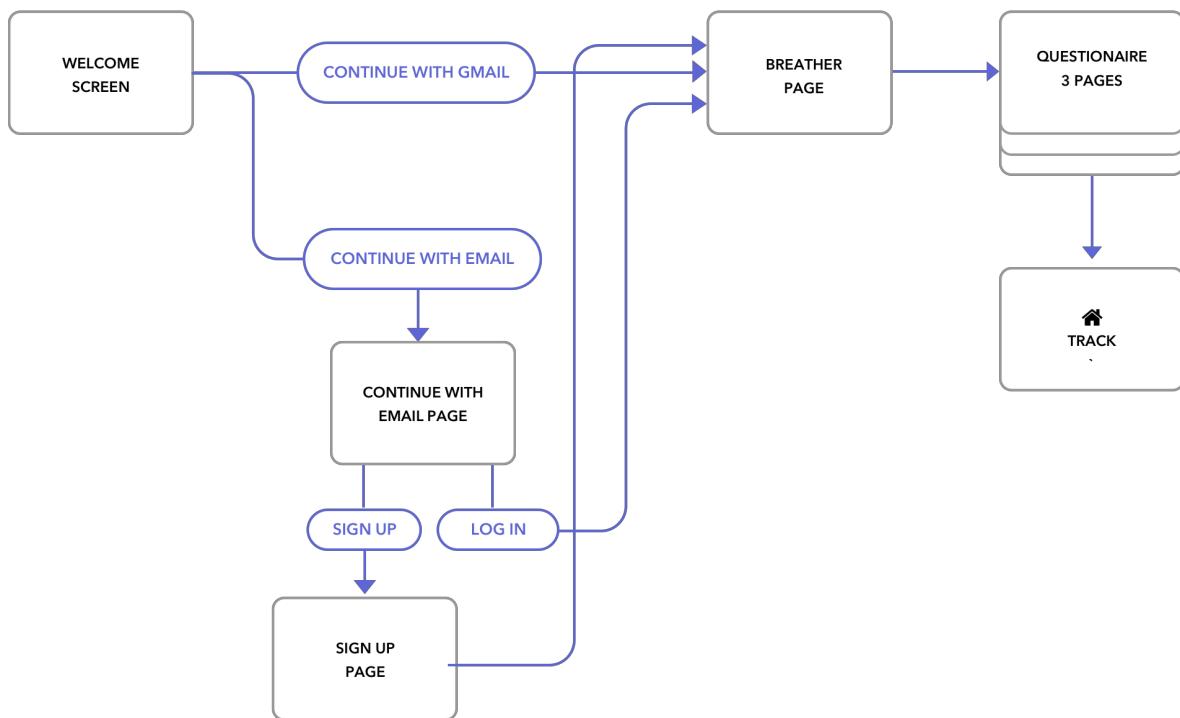
Next, I scripted a typical day for my persona. This process helped me decide how the app's user experience might be designed to fit in with a feeding routine.

<b>Thinks</b>	"I had too much coffee today. Maybe that was the reason for my migraine?"	"Where did I keep my diary?"	"This migraine is killing me. What is triggering it?"	"I didn't get proper sleep yesterday and had a migraine today"
<b>Does</b>	Decides to note it in her diary.	Searches for diary	Reads through her diary	Notes it in her diary.
<b>Feels</b>	Frustrated	Confused	Defeated	Uncomfortable

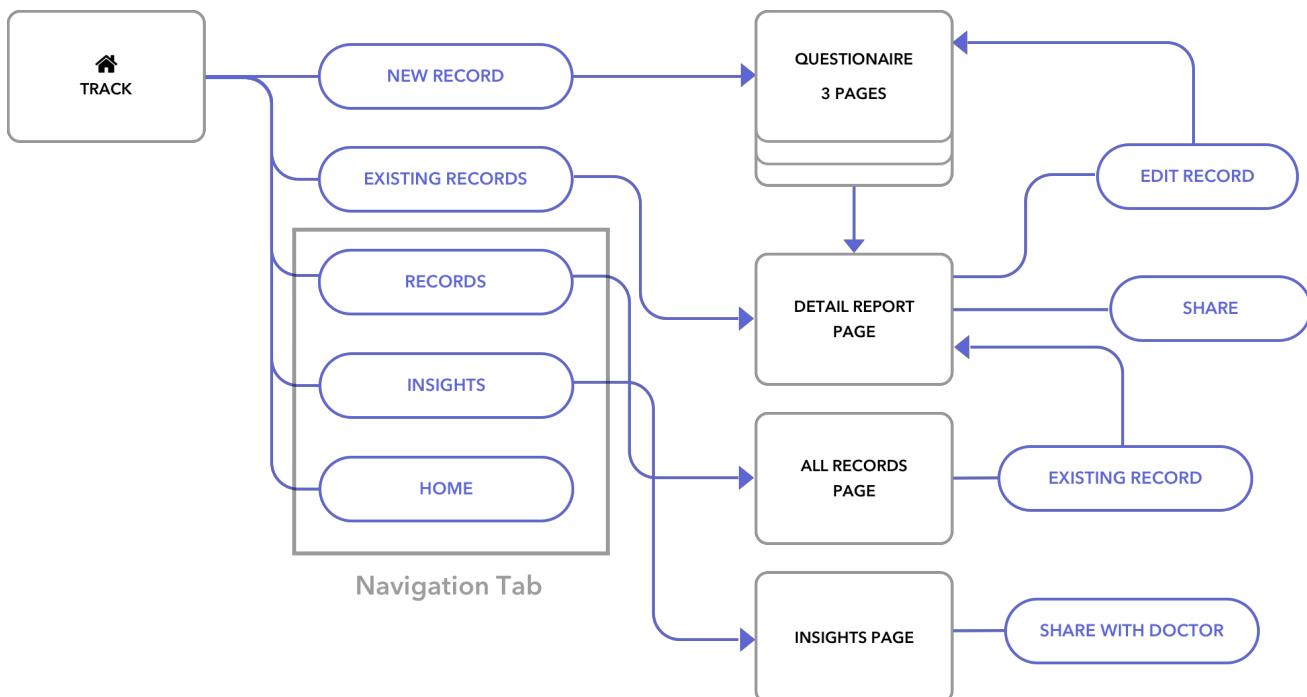
# User Journey

Up until now I had a vague idea of how the app will function. Mapping the basic flow of the app forced me to figure each step on the path the users will take throughout the solution. I first sketched it on paper and then digitally rendered it.

# Onboarding & Set Up

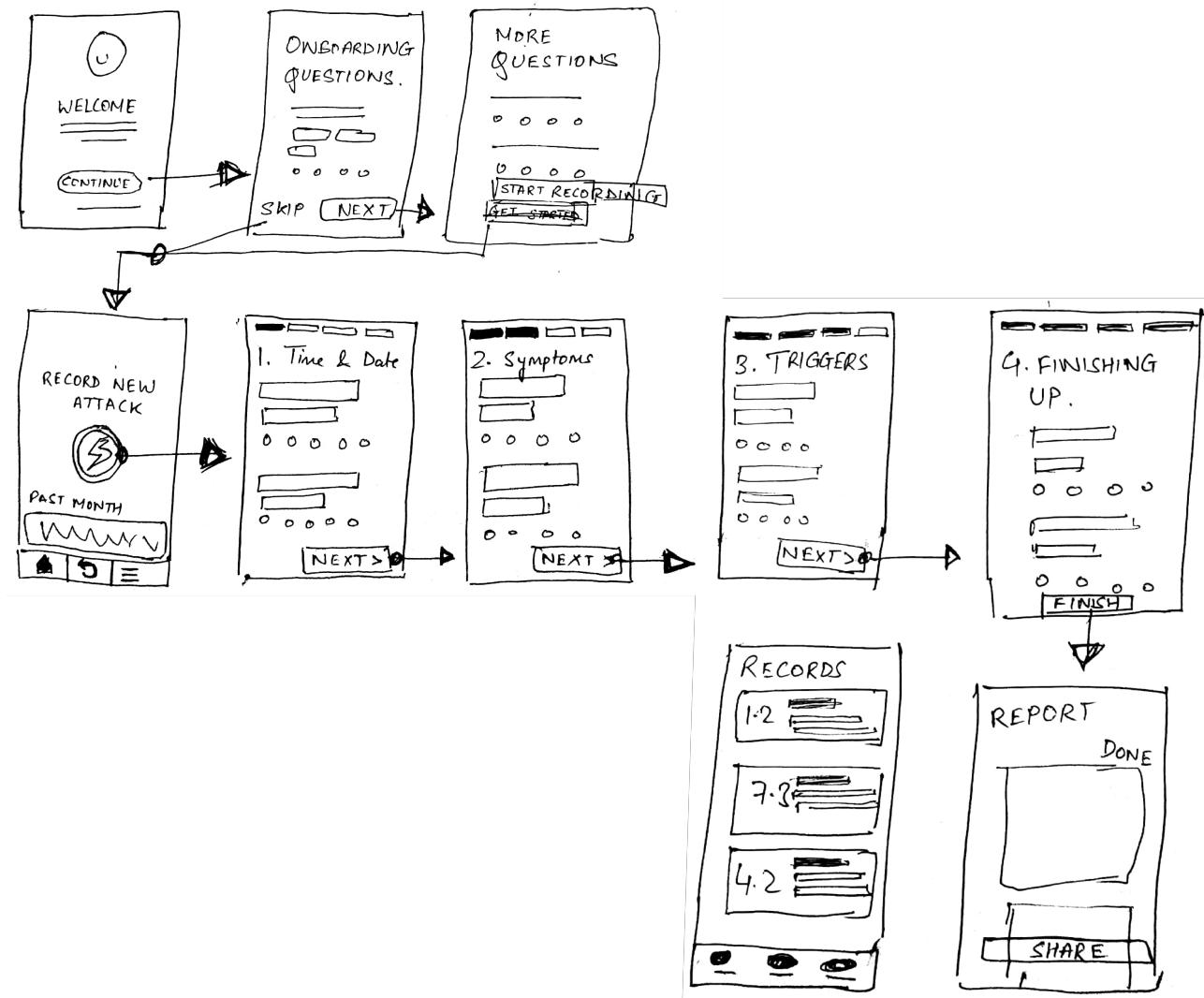


# Tracking migraines and Sending Reports

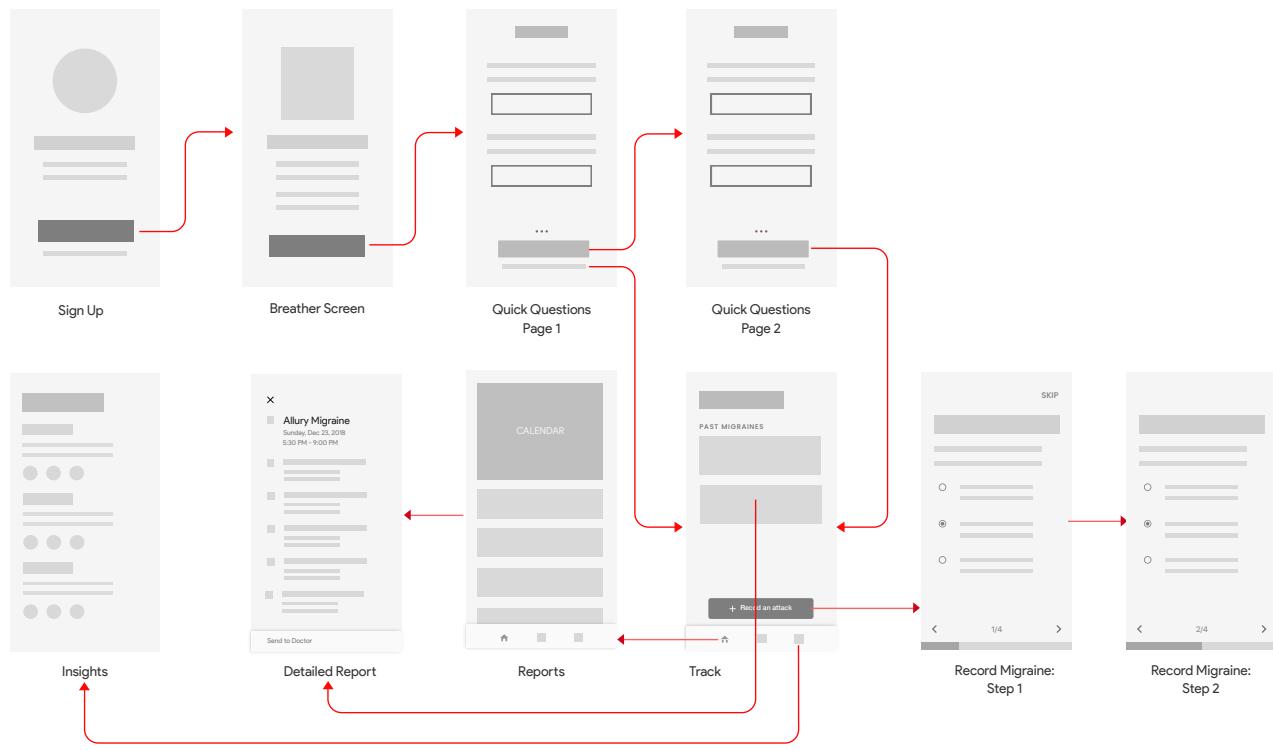


# Sketches

This was the first step to help me outline the app and visually imagine it.



# Low Fidelity Wireframes



# Medium Fidelity Wireframes

The medium-fidelity wireframes provide a detailed look at three key screens: Welcome, Breather Screen, and Questionnaire.

- Welcome:** This screen features a large 'X' icon and the text "It's not you, it's the migraine. Break free from the pain.". It includes a user profile section for "Alisha Sung" and an email link "alish.sung@gmail.com". Buttons for "Continue as Alisha Rene" and "Or continue with email" are also present.
- Breather Screen:** This screen features a large 'X' icon and the text "Not just a headache". It explains that living with migraine is about coping with unpredictability and identifies Heapspace as a tool for trigger and symptom identification. A prominent "Get Started" button is at the bottom.
- Questionnaire:** This screen is titled "About you" and explains that the information helps Heapspace build a better medical report. It includes fields for "Gender" (set to "Female"), "Birthday" (set to "July 21, 1996"), "Weight" (set to "70 kg"), and a "Next" button. A note at the bottom says "I'll do this later".

Welcome

Breather  
Screen

Questionnaire

## This Week

Yesterday

**7.5** 6:52 AM - 9:12 AM  
Painful Aura Headache  
2 hr 20 mins • Aura • Forehead

January 16

**5.4** 1:12 PM - 2:00 PM  
Mild Abdominal Migraine  
48 mins • Abdomen

**8.7** 6:52 AM - 9:12 AM  
Severe Aura Migraine  
2 hr 20 mins • Temples

**+**

 Track    Records    Insights

## Track

**January 2019**

S	M	T	W	T	F	S
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Yesterday

**7.5** 6:52 AM - 9:12 AM  
Painful Aura Headache  
2 hr 20 mins • Aura • Forehead

January 16

**5.4** 1:12 PM - 2:00 PM  
Mild Abdominal Migraine  
48 mins • Abdomen

**8.7** 6:52 AM - 9:12 AM  
Severe Aura Migraine

**Home**   **Records**   **Insights**

## Records

## Insights

Triggers

Coffee	12 attacks	<b>63%</b>
Alcohol	8 attacks	<b>48%</b>

**SHOW 3 MORE**

Pain Intensity

8.2	Highest Recorded
6.1	Average Recorded
3.4	Lowest Recorded

**Share with Doctor**

 Track    Records    Insights

## Insights

**x**

Did you consume any of these in the last 24 hours?

Coffee

Alcohol

Tea

Milk

Cheese

Chocolate

**+ add an option**

**Next**

New Migraine Record

**x** **Share this report**

- Severe Aura Headache**  
January 9, 1:30 PM - 3:40 PM
- Pain**  
8.4  
2.3 more than usual
- Time**  
3 Hours 10 Minutes  
35 minutes more than usual
- Triggers**  
Coffee  
Common in your attacks  
  
Cheese  
Rare  
  
Alcohol  
Common
- Medicines**  
Paracetamol 250 mg  
Had no effect  
  
Naproxen 100mg

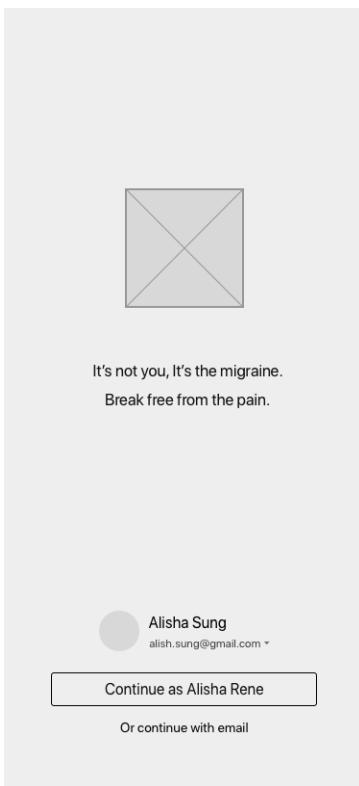
Detailed Report

# Navigation

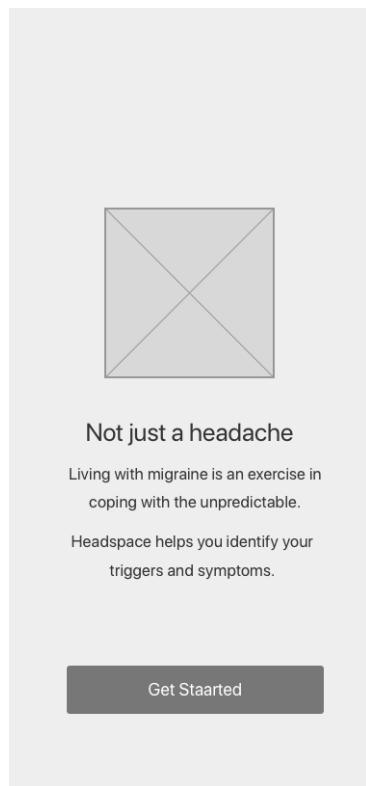
I did not have a lot of top level views so I opted for a bottom navigation with 3 views:

1. Track - add new reports, view recent reports
2. Reports - view all recorded reports
3. Insights - dig deep into what causes your migraines

# Onboarding



Welcome Screen



Breather Screen



Questionnaire

One of the goals of this app is to encourage the user to share insights aggregated by the app with their doctors. Every medical report needs basic patient information like age, gender, weight, height etc. The goal of the onboarding flow is to collect this information.

Logging in with a gmail account will help the wizard autofill the gender and age section of the questionnaire, ensuring a smoother user flow. If the user doesn't want to complete the questionnaire they can skip it altogether. The app will ask the user for this information afterwards if they get interested in building the medical report.

# Recording a Migraine

This Week

Yesterday

January 16

7.5 6:52 AM - 9:12 AM Painful Aura Headache 2 hr 20 mins • Aura • Forehead

5.4 1:12 PM - 2:00 PM Mild Abdominal Migraine 48 mins • Abdomen

8.7 6:52 AM - 9:12 AM Severe Aura Migraine 2 hr 20 mins • Temples

+ Track Reports Insights

This Week

Yesterday

January 16

7.5 6:52 AM - 9:12 AM Painful Aura Headache 2 hr 20 mins • Aura • Forehead

5.4 1:12 PM - 2:00 PM Mild Abdominal Migraine 48 mins • Abdomen

8.7 6:52 AM - 9:12 AM Severe Aura Migraine 2 hr 20 mins • Temples

Track Records Insights

x

Did you consume any of these in the last 24 hours?

Coffee

Alcohol

Tea

Milk

Cheese

Chocolate

+ add an option

< Next

Track - Android

Track - iOS

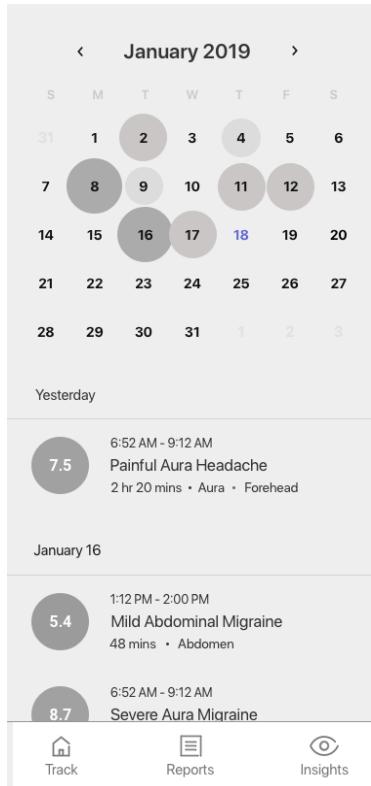
New Migraine Report

Migraines can be tracked from the Track (home) page of the app. The iOS and Android screens differ slightly in terms of the UI patterns followed by their respective platforms. The Android screen has a floating action button while the iOS has an action button on the top right.

If the user feels that these screens are getting in their way of recording new reports, they can disable these screens by clicking on “Don’t show again”.

Once the user is past the breather screen, they are greeted with QnA style questions. The QnA screen consists of familiar UI elements like checkbox, sliders and options boxes to help the user record their migraines without ever needing to type.

# Records and Insights



All Reports

Severe Aura Headache  
January 9, 1:30 PM - 3:40 PM

Pain  
8.4  
2.3 more than usual

Time  
3 Hours 10 Minutes  
35 minutes more than usual

Triggers  
Coffee  
Common in your attacks  
Cheese  
Rare  
Alcohol  
Common

Medicines  
Paracetamol 250 mg  
Had no effect  
Naproxen 100mg

Share this report

Detailed Report

**Insights**

Triggers

Coffee  
12 attacks  
Very Common  
63%

Alcohol  
8 attacks  
Common  
48%

SHOW 3 MORE

Pain Intensity

8.2  
Highest Recorded

6.1  
Average Recorded

3.4  
Lowest Recorded

Share with Doctor

Track Records Insights

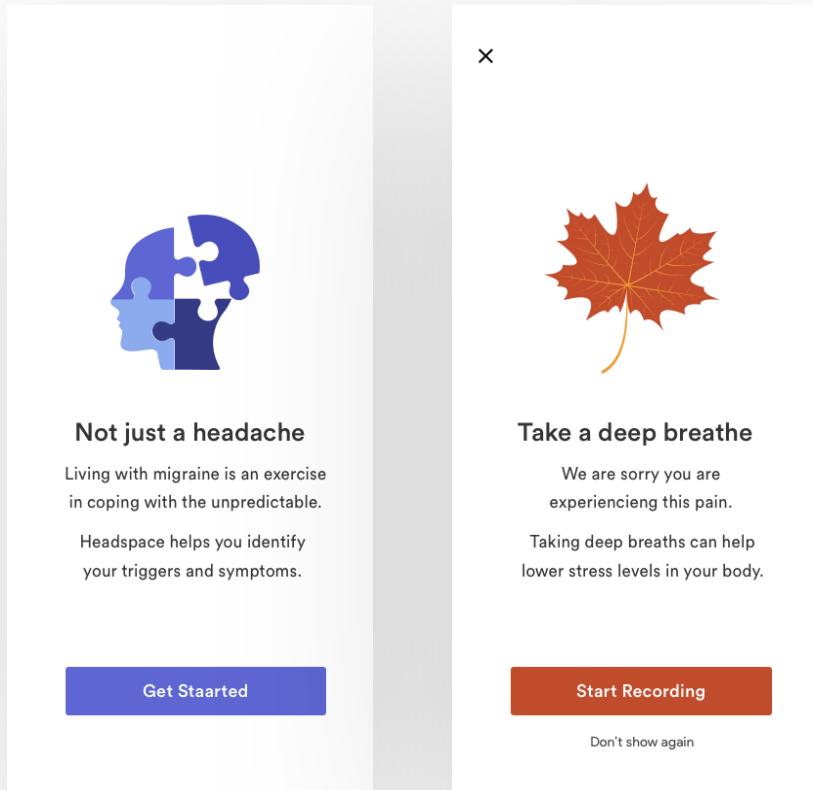
Insights

All recorded reports can be found in the Records tab. A calendar view helps the user jump to a specific date easily. The calendar also serves as visual timeline for your attacks with the size of the circle serving as an indicator of severity of your attacks on that day.

When the user click on a particular record, they are moved to the detailed report screen which contains all the information recorded by the user. The user can edit it or add some missing information by clicking on the edit icon.

The user can share a single report or share all reports with their doctor. The latter is preferred as the typical patient has an average of 15 migraines a month and exporting all these reports one at a time will be quite cumbersome for the user. This is the reason why the button to share all reports (in the insights page) is noticeably more prominent than the button to share a single report (in the detailed page report). Both these buttons stick to the bottom of the screen while you scroll the report / insight.

# Breather Screens



When the user clicks the compose or plus button, they are greeted by what I call a breather screen, which is like a screen that asks the user to take a pause and involve in a quick meditation exercise to help with their pain. This does provide somewhat of a friction in the flow of quickly recording migraines, but also tells the user that the app is not just another soulless bullet journal. When users are adding a new migraine they probably went through it recently or even are experiencing it at the moment. Their head is on fire and they probably are very sad and frustrated with it. These meditation exercises will help the user relax for a bit before they go forward recording the attack.

# High Fidelity Designs

# heads up

It's not you, It's the migraine.  
Break free from the pain.

[Continue with Gmail](#)

Or [continue with email](#)



## Not just a headache

Living with migraine is an exercise in coping with the unpredictable.

Headspace helps you identify your triggers and symptoms.

[Get Started](#)

## About you

This information helps Headspace provide build a better patient profile.



Gender
 

Female
▼

Birthday
 

July 31, 1996
▼

Weight
 

65 kg
▼

•
•
•

[Next](#)

I'll do this later

←

## About your migraines

This information helps Headspace provide provide better insights on your migraines.

Year
 

2015
▼

•
•
•

[Next](#)

# High Fidelity Designs

## This Week

Yesterday

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2 hr 20 mins • Temples

**+**

Home   Records   Insights

X

Did you consume any of these in the last 24 hours?

Coffee

Alcohol

Tea

Milk

Cheese

Chocolate

[+ add an option](#)

**Next**

**< January 2019 >**

S	M	T	W	T	F	S
31	1	2	3	4	5	6
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Home   Records   Insights

## Insights

Triggers

Coffee 12 attacks Very Common 63%

Alcohol 8 attacks Common 48%

[SHOW 3 MORE](#)

Pain Intensity

8.2 Highest Recorded

6.1 Average Recorded

3.4 Lowest Recorded

**Share with Doctor**

Home   Records   Insights

# High Fidelity Designs

The image displays two side-by-side screenshots of a mobile application interface. The left screenshot shows a landing page with a large orange maple leaf icon and a button labeled "Start Recording". The right screenshot shows a detailed report for a "Severe Aura Headache" on January 9, 1:30 PM - 3:40 PM. The report includes sections for Pain (8.4, 2.3 more than usual), Time (3 Hours 10 Minutes, 35 minutes more than usual), Triggers (Coffee, Common in your attacks; Cheese, Rare; Alcohol, Common), and Medicines (Paracetamol 250 mg, Had no effect; Naproxen 100mg, had little effect). A "Share this report" button is at the bottom right.

## Conclusion

Designing this bullet journal has been a journey in asking a lot of questions. It was clear from the onset that a major challenge would be to compete with physical diaries that were more intuitive to use for the migraine patient demographic. I researched why migraine patients journal their attacks and how physicians built a treatment plan. I understood that patients needed a quick and easy way to track their triggers and onsets leading to a migraine. I realised that a mobile app with aggregated insights, medical reports and an easy wizard to track attacks would have a competitive edge over a physical diary and decided to pursue that angle.