

Nöida



Ease your emotional tides

Our Mission

Why this project?

Isolation and stress have been catalysed by Covid-19, and we have had to resort to technology to keep up with the demands of work and life in these difficult circumstances. There's been a clear impact on our mental health: the World Health Organisation reports that the global prevalence of anxiety and depression has increased by 25% (WHO, 2022).

Yet, an increasing disparity of wealth has also mean that it's difficult to get access to the services we need.

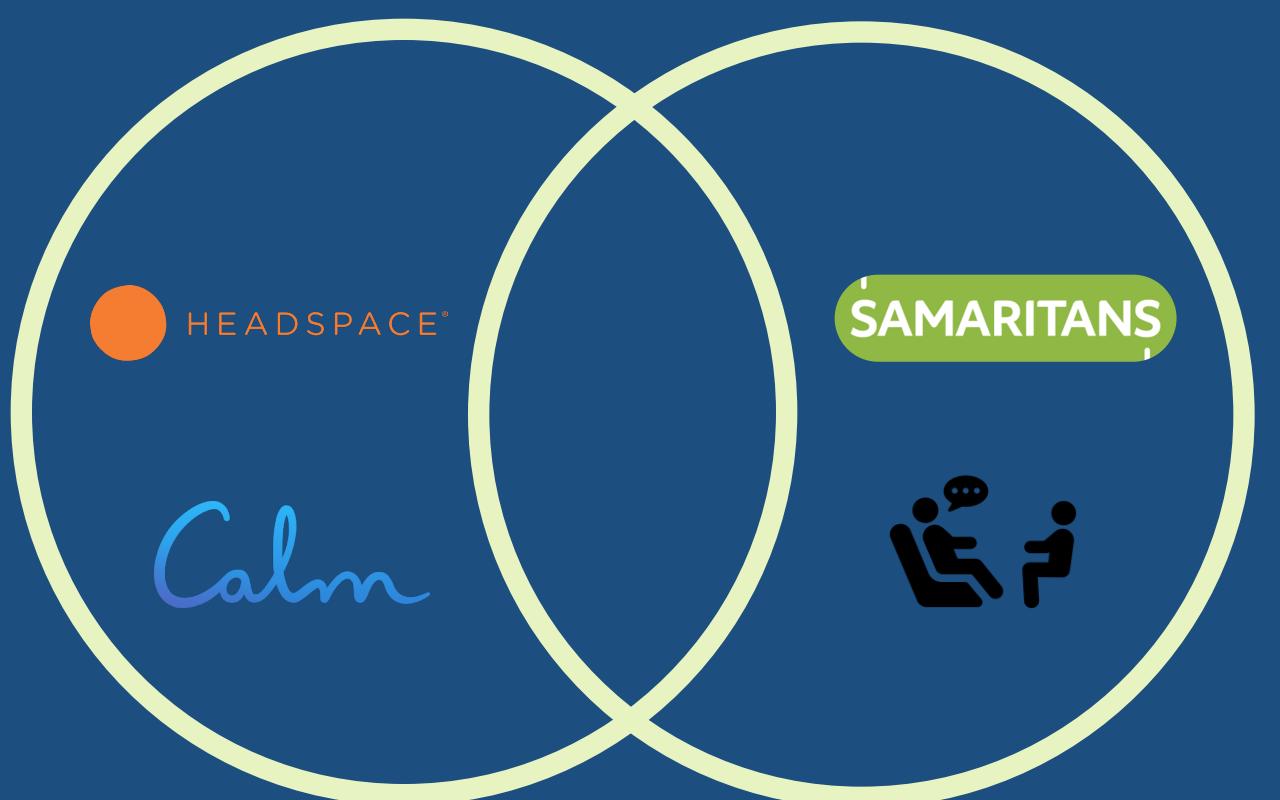


Fig 1. Competitor Venn Diagram

What's out there?

Psychotherapy is expensive, and free resources like Samaritans are often understaffed with long wait times. While more accessible, existing mobile apps such as headspace and Calm are easy to lose focus on.

We aim to be the perfect inbetween: providing users with interaction, guidance and support when they need it most.

We want to guide participants from a state of **panic** to a state of **calm** by engaging them step-by-step through their own **interactive therapeutic story**.

What does the market look like?

In 2020, mental health startup funding was 5.5 times from four years earlier, just in the States (Jennings, 2021).

Although this proves the widespread demand for mental health support services within the digital landscape, it also implies a rapidly expanding industry with harsh competition in a highly saturated market.

The American Psychiatric Association has developed an app rating system to help professionals review mobile and online apps that provide mental health support (Truschel and Tzeses, 2022). We aim to send this portfolio to the app to receive further feedback and recommendations for future directions.

User Persona

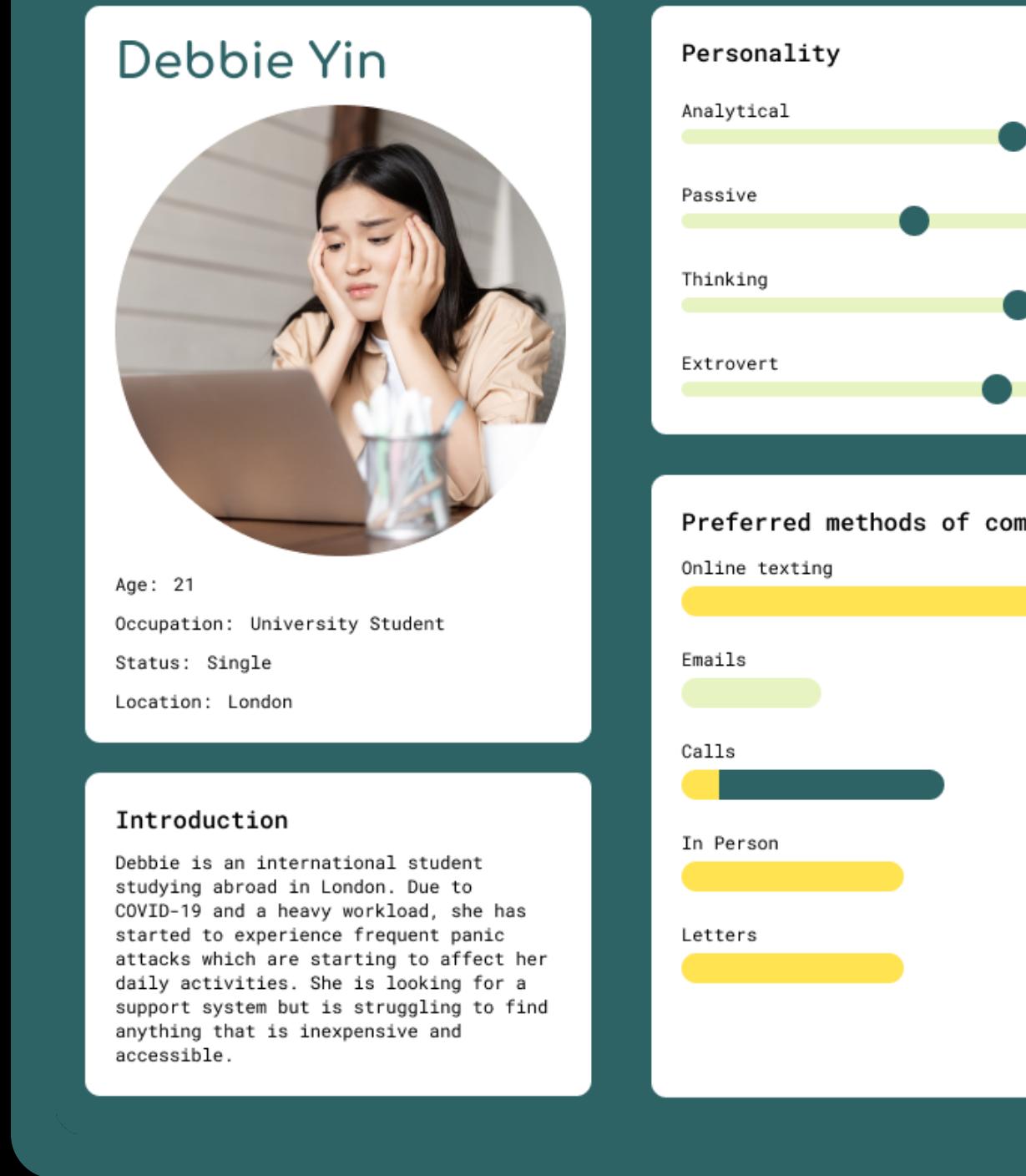


Fig 2. User Persona

Above is our user persona, which describes our target audience through an example. Our target audience is:

young adults between 16-24, who experience anxiety/panic and would like an accessible way to calm down.

Mindset

With our objective of calming our participant during a moment of panic, we recognised that it was integral to the project's success to define the desired mindset for the participant to reach at an early stage of the design process.

At the beginning of the experience, the user might feel...

anxious, on edge, restless, panicked, distraught, upset, scared, frightened, dysregulated

And we would ideally like them to end the experience feeling more...

Calm, peaceful, regulated, whole, stable

If not a whole transformation, this experience could be an intervention or the first step in calming down. We will need to ensure that we consider this ideal 'mindset' throughout our design process in order to achieve it successfully.

Naida is for...

Form & Platform



Why a mobile platform?

With 98% of young adults in the UK owning a smartphone (Boyle, 2020), mobile platforms are extremely accessible. We keep our phones near us at all times - meaning that even in the middle of a panic attack, it is highly likely that we can reach for our phone. We are also spending an increasingly long amount of time on our phones; we are used to the format, and find apps familiar. This makes mobile platforms a straightforward way to create an intuitive experience. Users can also input information through voice (microphones) and touch (typing/touching/buttons/drawing). While other platforms could create a more immersive and interactive experience, for a calming project, accessibility is key. Hence, a mobile platform was the best choice for us.

Why an interactive story?

Apps like Headspace and Calm may be ways of relaxing the user, but they are equally easy to lose track of. These apps do not hold the user accountable; they do not require user input in order to progress.

But in the midst of a panic attack, it is ideal for the user to be guided and supported step-by-step: to not feel abandoned, and to have their options presented right in front of them. This is why our experience will follow a conversational narrative structure. I.e, the user will interact with a narrator in order to make choices and progress. And with each calming activity that the user partakes in, their input will be required. The benefit of this is that their activities can also be recorded, tracking their progress as they use the app.

Why a Companion?

1 In need of a therapist?

For people who can't access a therapist, we want them to be able to use this app and 'speak' to the companion in a way similar to a therapist. If someone is using this app, it is likely that they are doing so because they have no one to talk to.

By acting as a friendly face, the user can become connected to the companion and feel less alone.

2 A Familiar Face

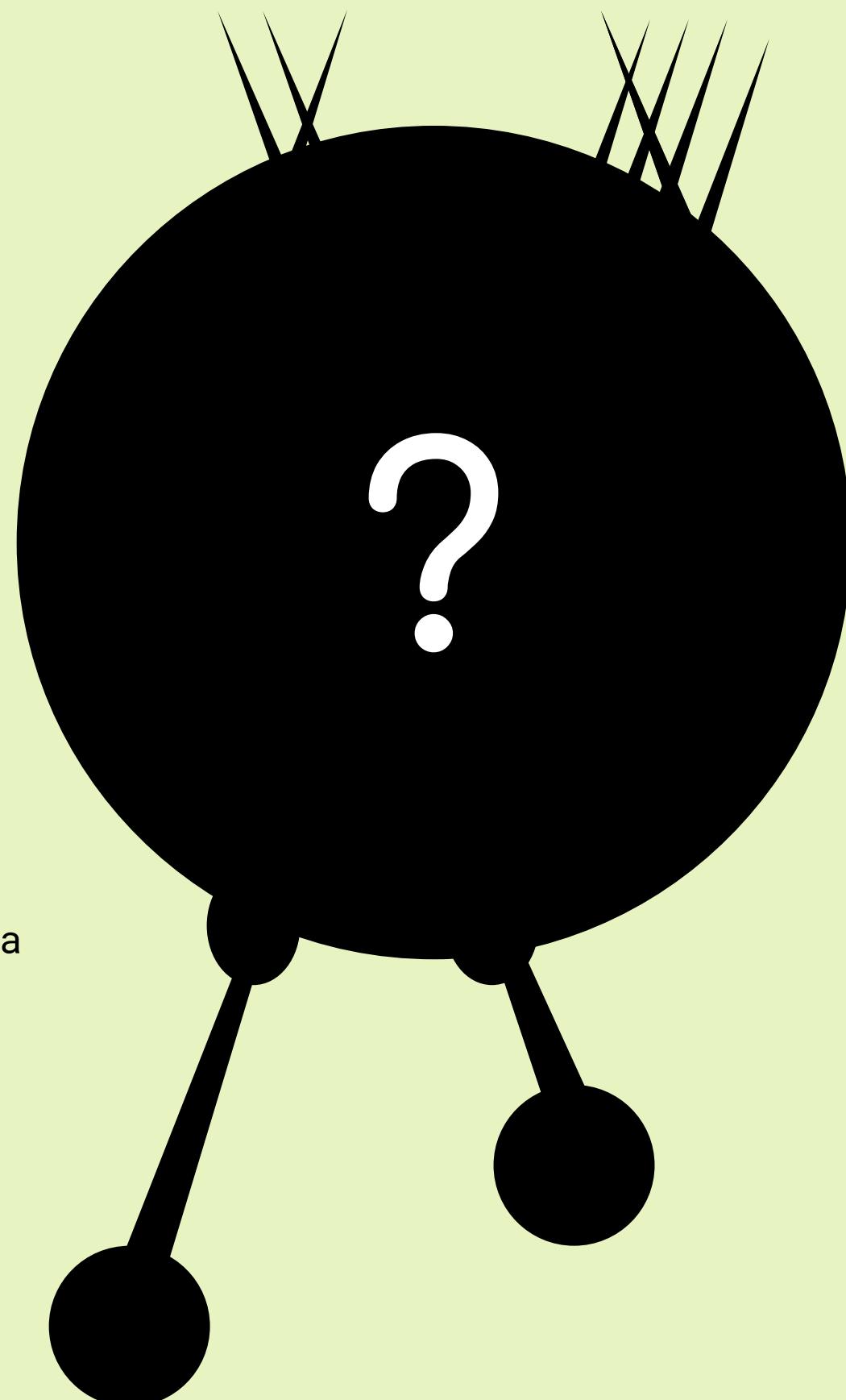
The companions can act almost like pets. Brooks et al. describe the use of pets in emotional work as they provide a consistent and proximate source of calming support and companionship (Brooks et al., 2018).

By ensuring that the companions are creatures/animals, they can act as a cute and comforting figure of support. It also avoids the issue of diversity, representation, or potential similarities between people if we used a human companion.

3 A longer-term vision...

With further development, we could potentially create a sophisticated system for dialogue between the user and the companion. By using AI to provide a task-oriented framework, we could allow human-like behaviours and speech patterns in the companion (Oh, et al., 2020).

This would make the interaction feel more 'natural'. Through consultations with psychologists and linguists, we could find a way to make a digital therapist...



Our Strategy

Why Agile?

As interdisciplinary students, we thought the we could produce our best performance by using the agile design approach that enables us to work as a cross-functional team. Rather than putting labels on our roles, we acted as each others' editors and critics.

Moreover, this rapid development approach was essential for us since we were working under a tight timeframe having invested more time on establishing our product idea. By working under an agile design workflow, we were also able to incorporate weekly feedback we received from our tutors.



Fig 3. Apps we used

Collaborative Design

We used various Creative Cloud applications whether we were creating components or animating transitions. Interestingly, as a team we both used Adobe XD and Figma at various stages in our product development process - we were both willing to learn and help each other learn applications we had less experience with. Google Workspace was an essential component of our collaboration, since at some stages we were working from different timezones.

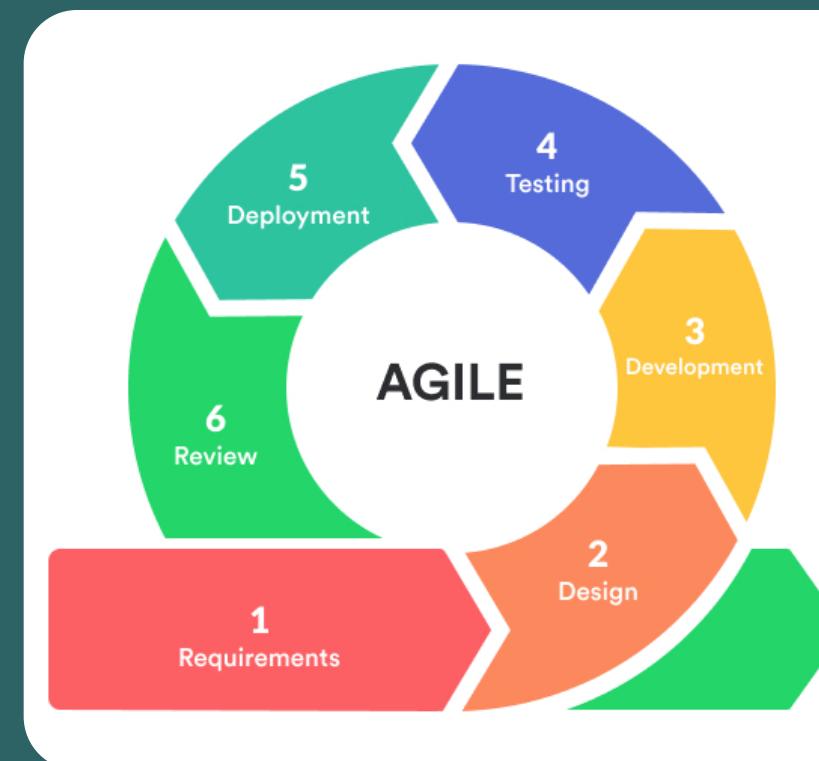


Fig 4. Agile Approach (Source: Indevlab., 2022)

Sprint Meetings

Sprint meetings allowed us to have a structured workflow to process tasks in small but manageable increments.

We would begin our sprint meetings by evaluating our progress using the agenda set in the week before. Then we would focus on tasks we have agreed was best to complete together. This enabled us to efficiently use the time we invested in this project both independently and collaboratively.

Fig 5. Meeting Schedule (Source: Screenshot of Google Docs)

| Week | Notable dates | Meeting 1 goals | Meeting 2 goals |
|---------------------|---|--|--|
| Week 7 (tues 01/03) | fri 04/03 - Webflow session with Ewan (14:00-16:00) | (11:00) - General therapy research to inform | - Paper prototypes/wireframes - Look into style inspo |
| Week 8 (tues 08/03) | - | (12:00-14:00) BEFORE —Concept art DURING —Annotate wireframes —Make documents for style visual/sound - | BEFORE - Formulate style guide (Colour scheme, font, etc.) - Research breathing thing (headphones? Touch? Options?) —Concept art (here) DURING - Micro user flow (prototype bit) - Create and plan pitch |

Fig 6. Remote Meeting Schedule
(Source: Screenshot of Google Docs)

| day | Joint work time 10-18(GMT) // 18-02(JPT) |
|------|---|
| 10th | Start: 14 (GMT) // 22 (JPT) <input type="checkbox"/> Decide target audience <input type="checkbox"/> Companion research <input type="checkbox"/> Slides 1-6 End: 17 (GMT) // 03 (JPT) |
| 11th | Start: 12 (GMT) // 20 (JPT) <input type="checkbox"/> Draw final user flow <input type="checkbox"/> Slides 7-12 |
| 12th | Start: 12 (GMT) // 20 (JPT) <input type="checkbox"/> Develop modes of interaction <input type="checkbox"/> Processing <input type="checkbox"/> Gyroscope <input type="checkbox"/> Slides 13-15 <input type="checkbox"/> Finalize prototype |
| 13th | <input type="checkbox"/> Dump into bibliography |
| 14th | DUE AT 13 (GMT) // 21 (JPT) |

1

We started with a discussion of the overall vision of what we had for the app. We brainstormed various activities that could possibly take place on the app, whilst highlighting essential features.

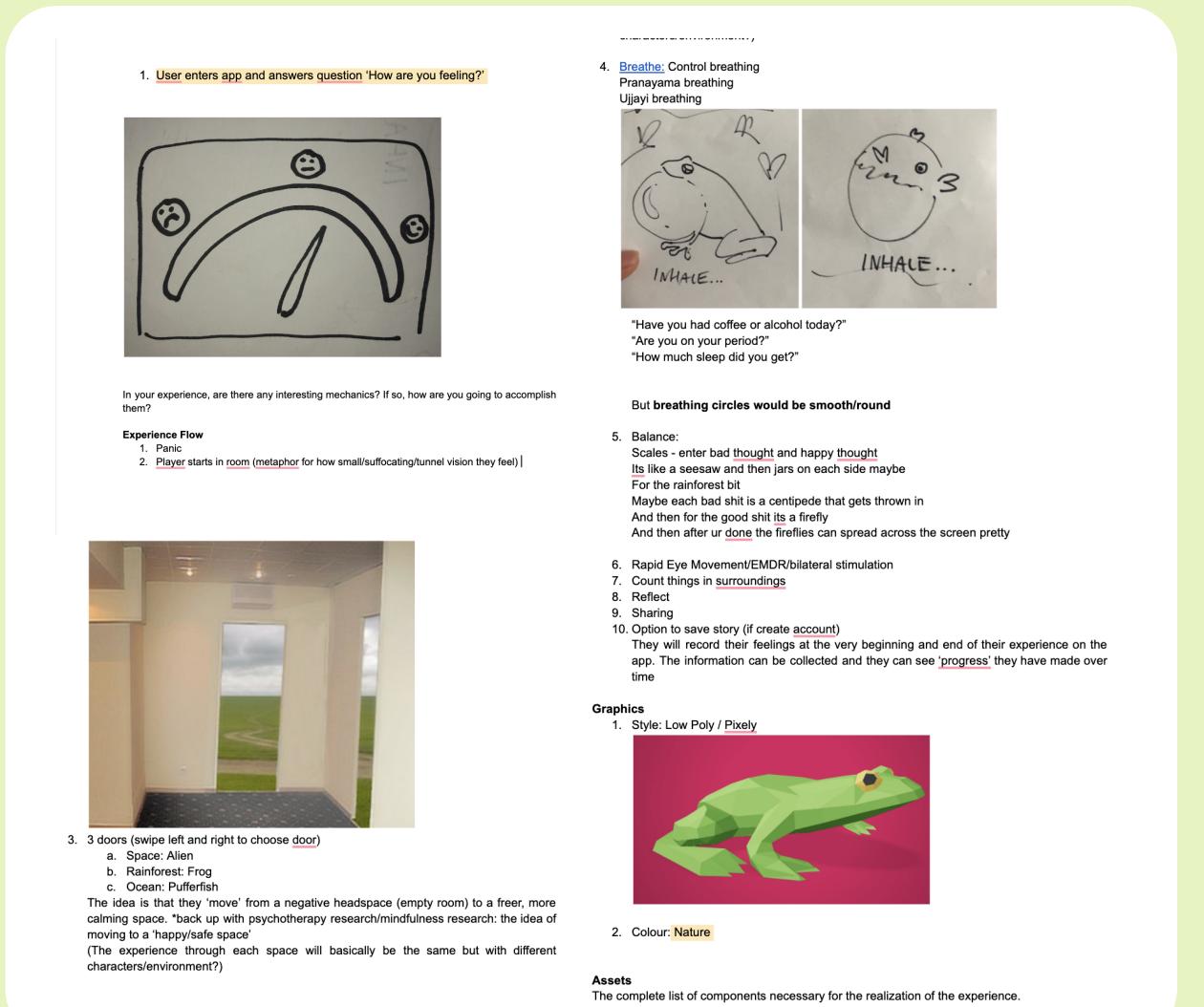


Fig 7. App Brainstorming (Source: Screenshot of Google Docs)

2

By carrying background research into different therapeutic techniques, we narrowed down the gameplay to three activities.

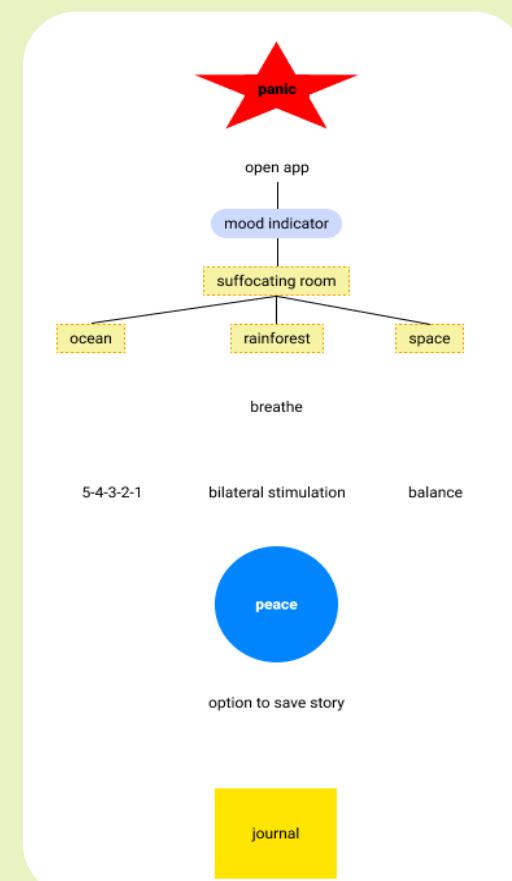
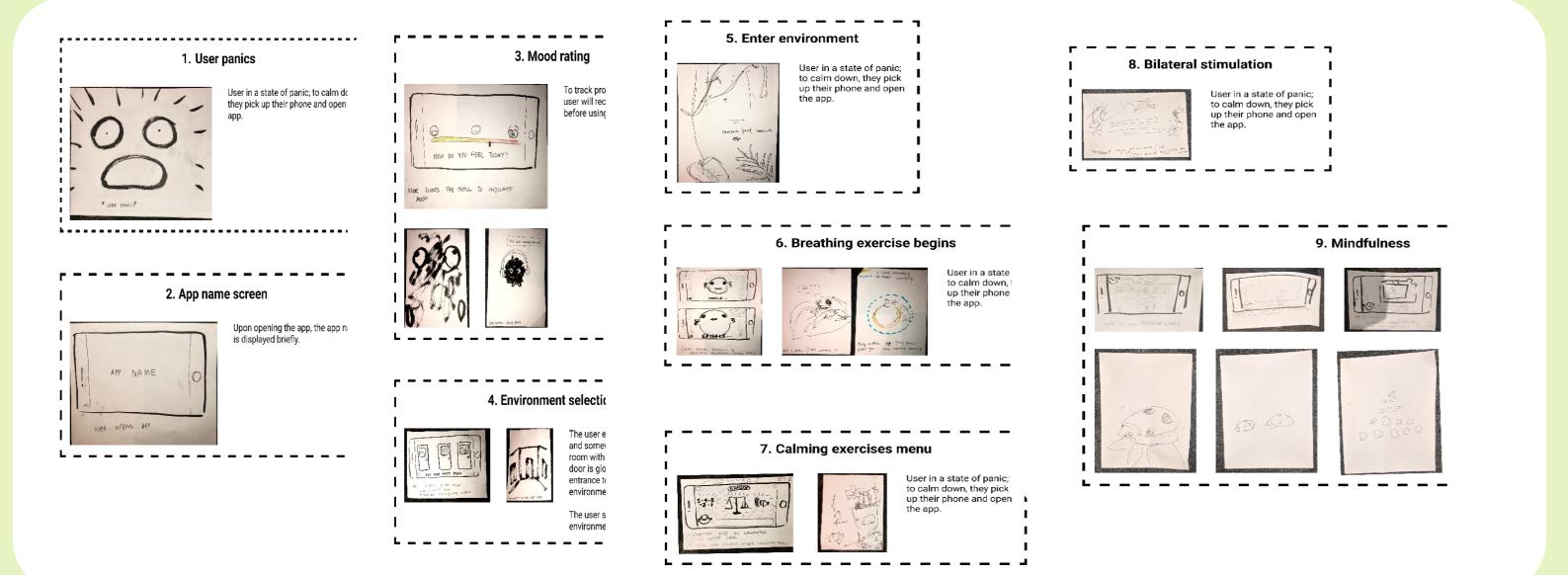


Fig 8. Macro-scale user journey
(Source: Screenshot of Figma)

3



We delved into a more micro-view of the user journey by discussing our independently sketched paper wireframes. This allowed us to also integrate our visions for the user interface.

4

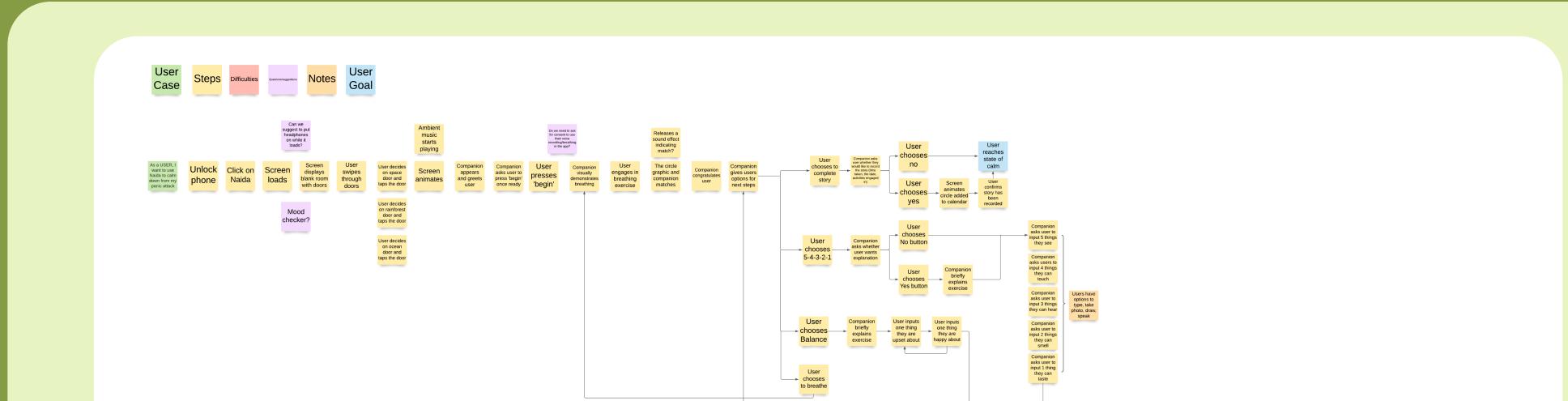


Fig 10. User Journey Map (Source: Screenshot of LucidChart)

By mapping out the user journey with sticky notes, we identified pain-points within various scenarios to adjust accordingly. Moreover, we were able to enable more flexibility within the user's journey.

As a anxious student, I WANT TO open the app Naida IN ORDER TO calm down from my panic attack.

So, what will the journey be?

In order to achieve the user goal, we ensure that every step of the journey on 3 features that the user flow was based off.

1 Intuitive

Even an emotionally unstable user must be able to follow the steps.

2 Progressive

The user flow must replicate a journey, a progression that a user achieves.



Breathe

Deep yogic breathing is a scientifically verified method for balancing the autonomic nervous system and hence influencing psychological and stress-related disorders (Zope and Zope, 2013). It is the most straightforward action that we can make to calm us down, which is why we decided to have it the **first activity the user does on the app**.

We compared various yogic breathing techniques and their effects, and selected the Ujayi technique: a technique often referred to as the 'Ocean Breath', with proven ability to improve oxygen saturation, lower blood pressure, and reduce anxiety (Mason et al., 2013).

For the interface, we took inspiration from Xhalr: but added **sound detection** to make it more interactive.



Fig: Screenshot of Xhalr (Cline, 2022)

5,4,3,2,1



The 5-4-3-2-1 exercise is a **mindfulness** activity based on a well-known grounding technique that guides an individual to engage their 5 sensory motors and force a reconnection with their immediate reality (Shukla, 2020).

Once the user has slowed down their breathing, they will be asked to input what they see/hear/feel/smell/taste in an input format that suits them.

Balance



In this exercise we guide the user to a more balanced cognitive state from a negatively biased state of mind. Recent research implies that cognitive balance has functional value and may represent one's state of mental health (Beck et al., 1979). We will encourage this 'balance' by asking the user to input a negative thought balanced by a positive one, as many times as they wish. This can also serve as a way of 'venting' and provide relief for the user.

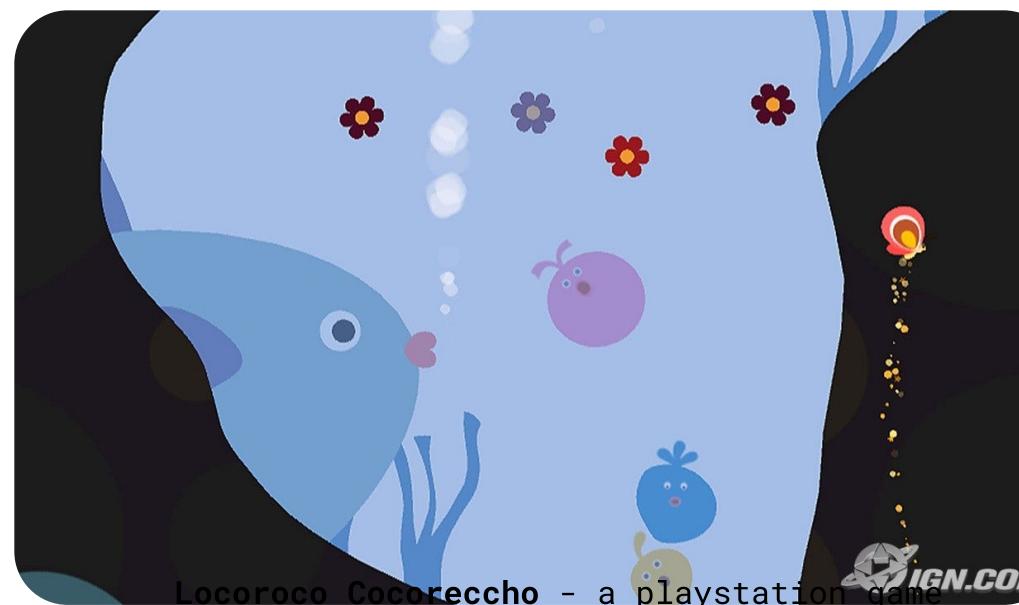
Our visual style:

Stylistic References

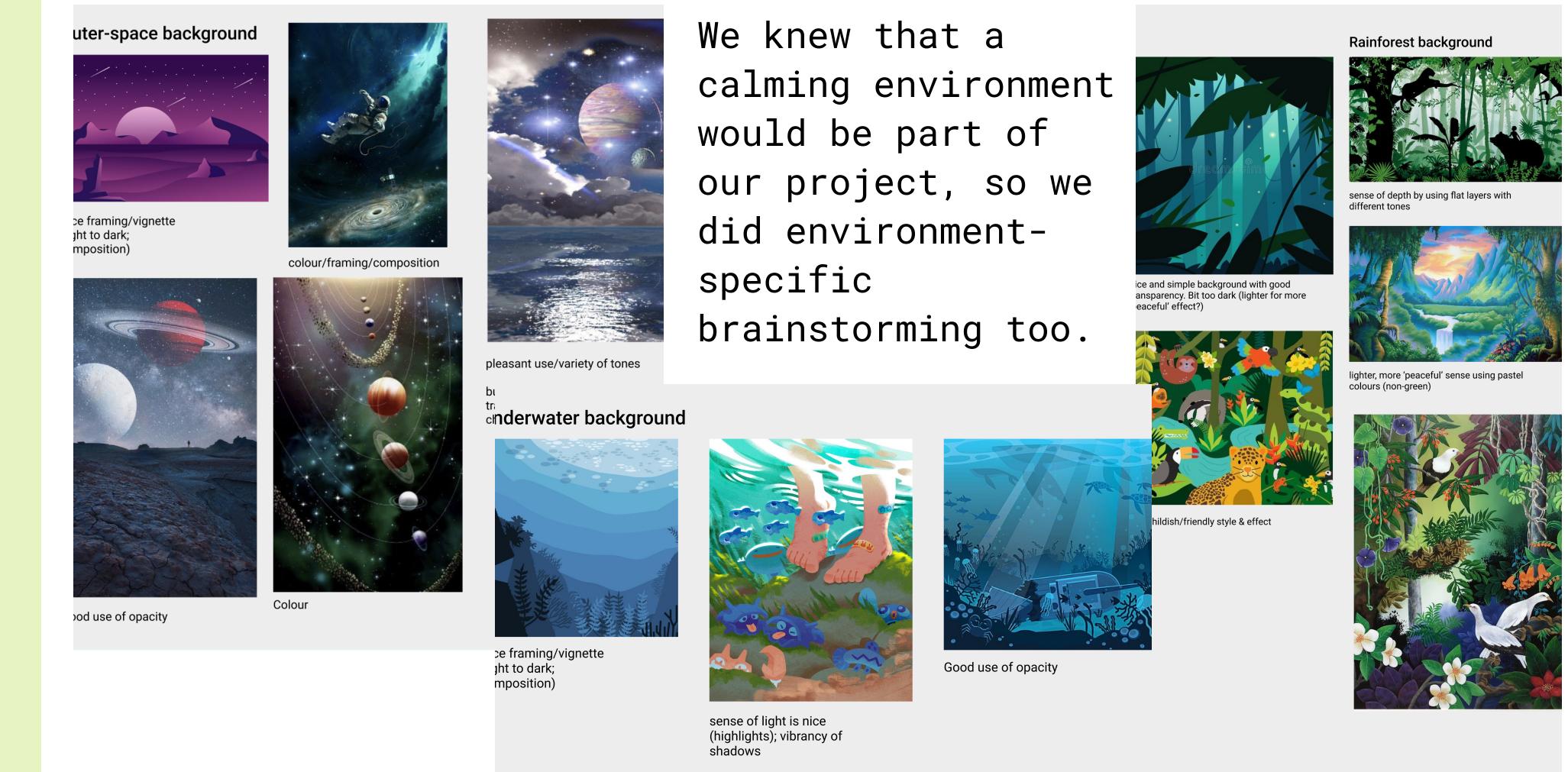
Headspace and Locoroco Cocoreccho sprung to mind when brainstorming for their flat, cute, colourful and friendly aesthetics.

Locoroco uses transparency to give depth to the animations, and Headspace provided an example of how cartoonish and simple graphics can support the delivery of a calming effect.

One question we had was whether this style of graphic would be too 'childish'. However, apps like Headspace are used by people of all ages, and still have a relatively 'cute' aesthetic. If anything, this could provide a comforting sense of familiarity and friendliness, and hence comfort an anxious individual.



In order to establish our visual style, we took reference from other sources to find inspiration for: the general aesthetic; uses of colour, form, and tone; and to find examples that would be suitable for an interactive, animated, and accessible project. This brainstorming stage allowed us to have enough inspiration to apply our own creativity and come up with a cohesive visual style to be used throughout the project.



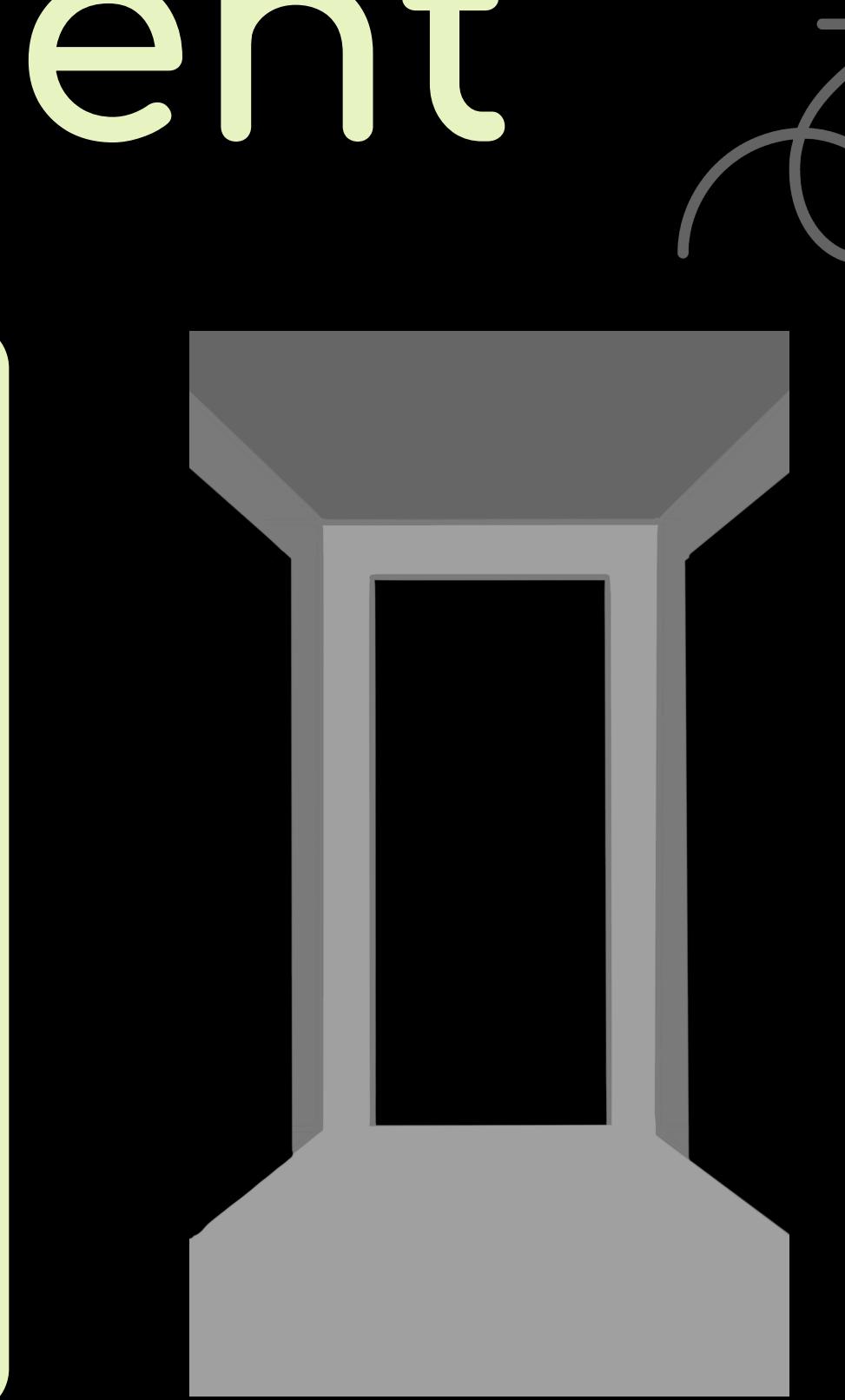
A natural environment

Why nature?

We chose to include natural environments in the experience to remove the user from their stressful environment, and because it could also add an aesthetically pleasing touch.

There are also forms of nature therapy: originating in Japan, participants experience the therapeutic and relaxing effects of forests when immersed, with various studies indicating that visits to forests affect health positively. (Rozmi, 2020)

Indeed, a real visit to these environments are not possible. But by using immersive and interactive techniques, and elegant design, we can create the sense of being in nature which may remind the user of previous experiences they have had in these locations. There have also been other projects such as VR forest therapy for individuals without access (ibid.).

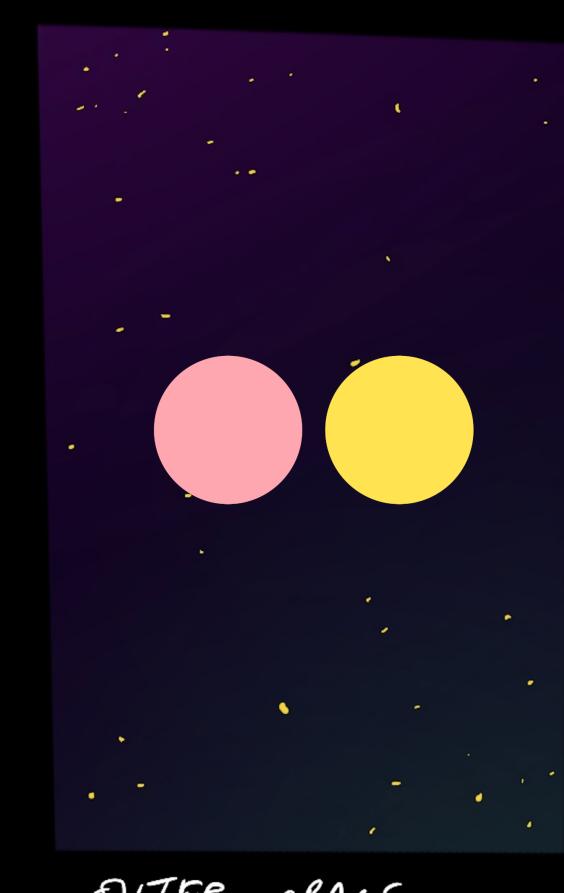
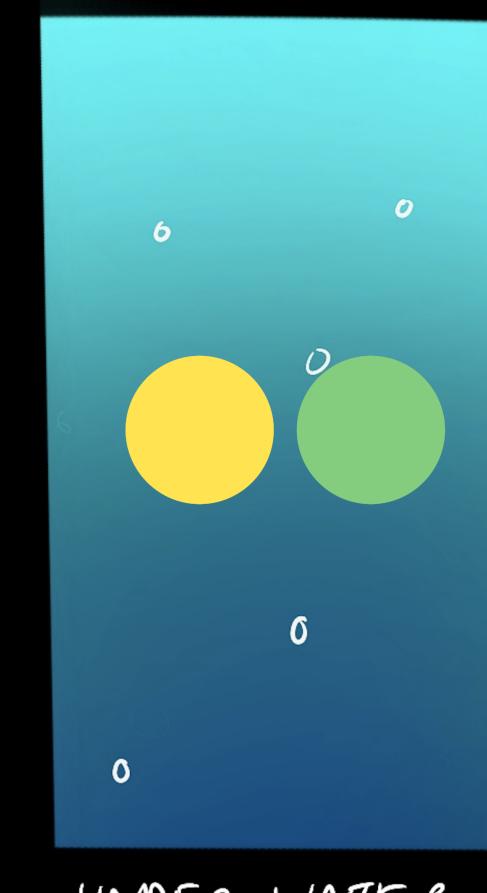
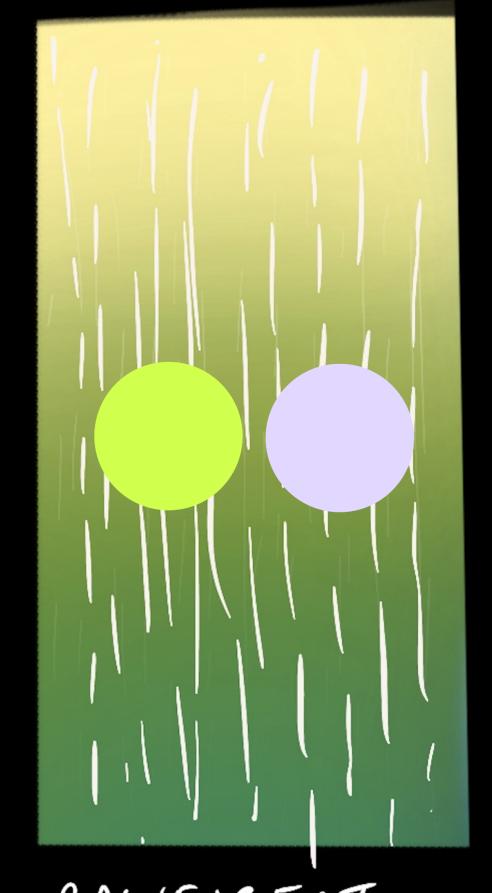


1 An Empty Room

The user starts in a grey, empty room. They transition into the natural environment, with the movement symbolising a transition into a calmer headspace.

2 A natural environment

The user will be immersed in a nature-inspired environment, featuring peaceful ambient sounds and moving backgrounds to immerse them



Designing the environments

To design the backgrounds, we drew from the mood boards we created earlier in the design process to inform a colour scheme for each environment and the general aesthetic. We made use of a variety of hues and tones to create subtle but beautiful effects.

Audio was also used to add to the atmosphere: for the prototype, we produced our own ambient music for the space environment. We wanted the music to be pleasant without being overwhelming.

Meet your Companion!

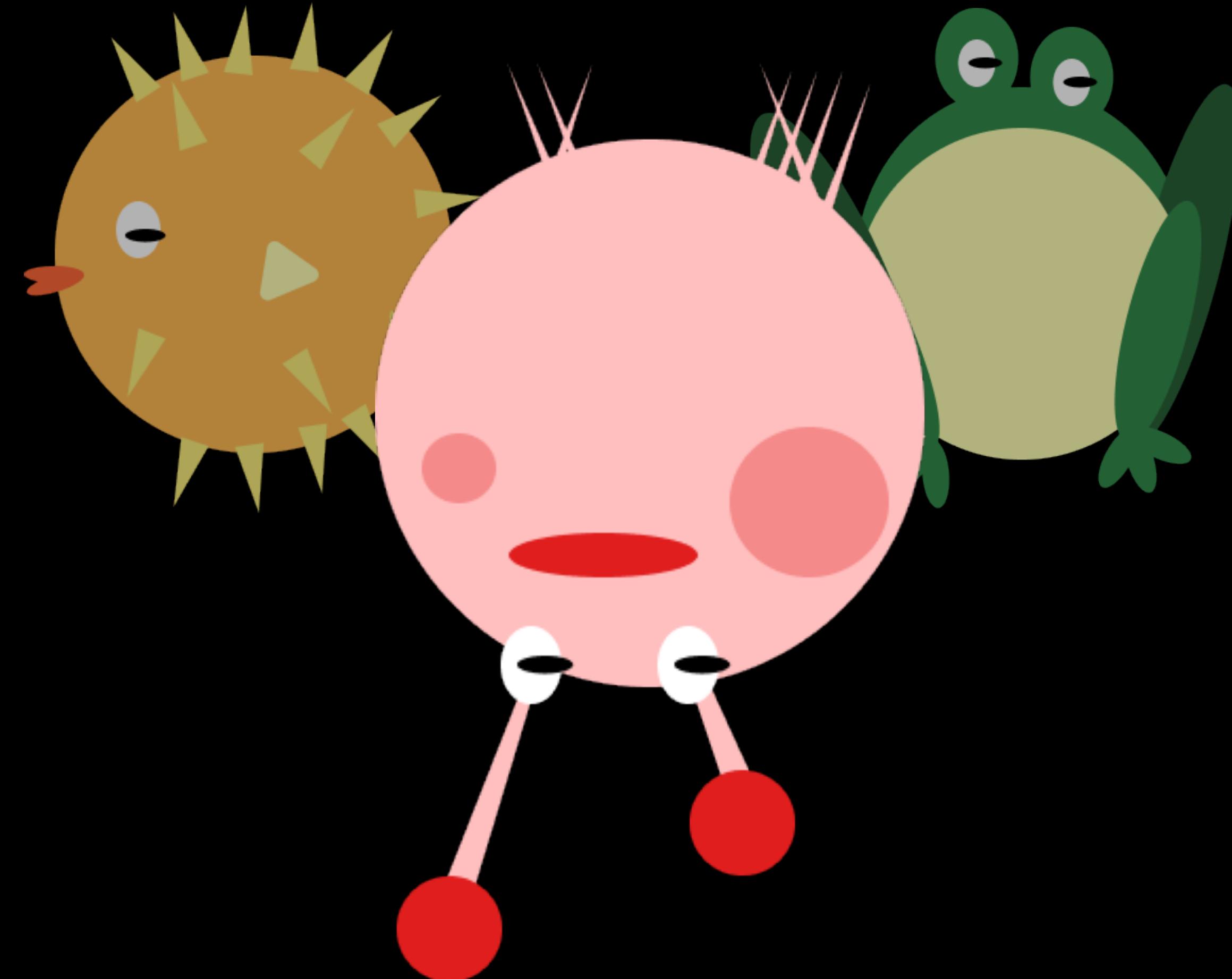
1 I look like...

By designing the companions with entirely geometric shapes, we kept the companion consistent with our flat design approach.

We also made sure we used around 3 colours for each companion.

Each environment has its own character, a creature, which we chose since they are free from cultural connotations and unlikely to trigger a panicking user. Its also cute and friendly

It is our duty to navigate these differences with empathy and to strive for meaningful inclusion of all cultures, genders, sexualities, races, abilities and disabilities into proper global society.



2 I sound like...

The companions speak in cute gibberish. We did not want to make them overly anthropomorphic, so we found a direct narration unsuitable. However a gibberish language gives the effect of dialogue whilst still remaining somewhat 'alien'

Hello, We Are

Naida

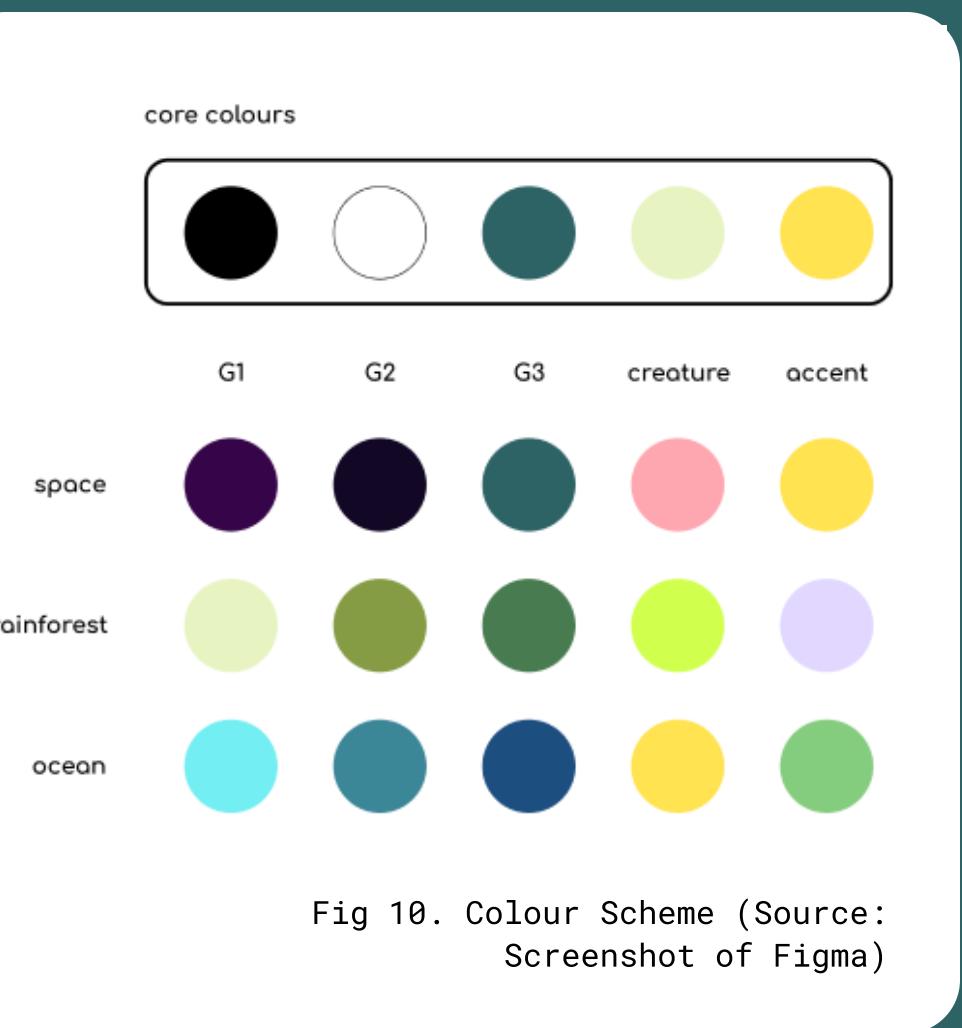
Ease your emotional tides

仄いだ

= to have
calmed/
lulled down

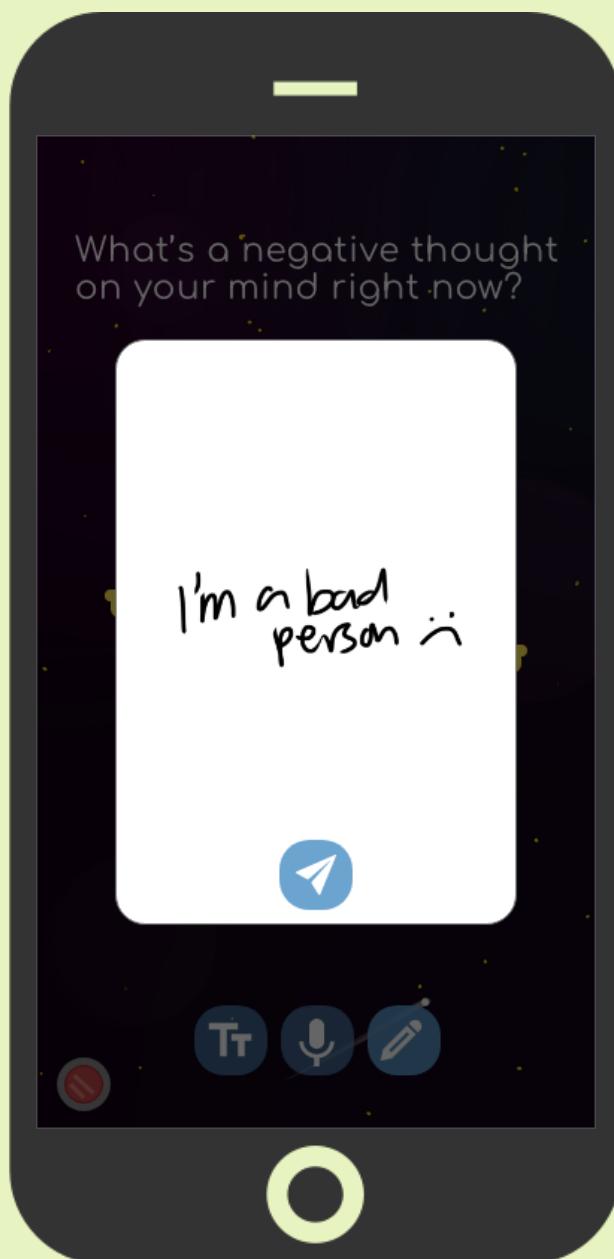
We created our logo based on our primary font Comfortaa and graphic style, by imitating the breathing exercise through a character that reflects the core aspect of our app: a caring companion.

In Japanese, Naida means to have calmed/lulled down, and is often used to describe tides. As we described earlier, we want to help the users ease their emotional tides, and hence we chose this brand name.

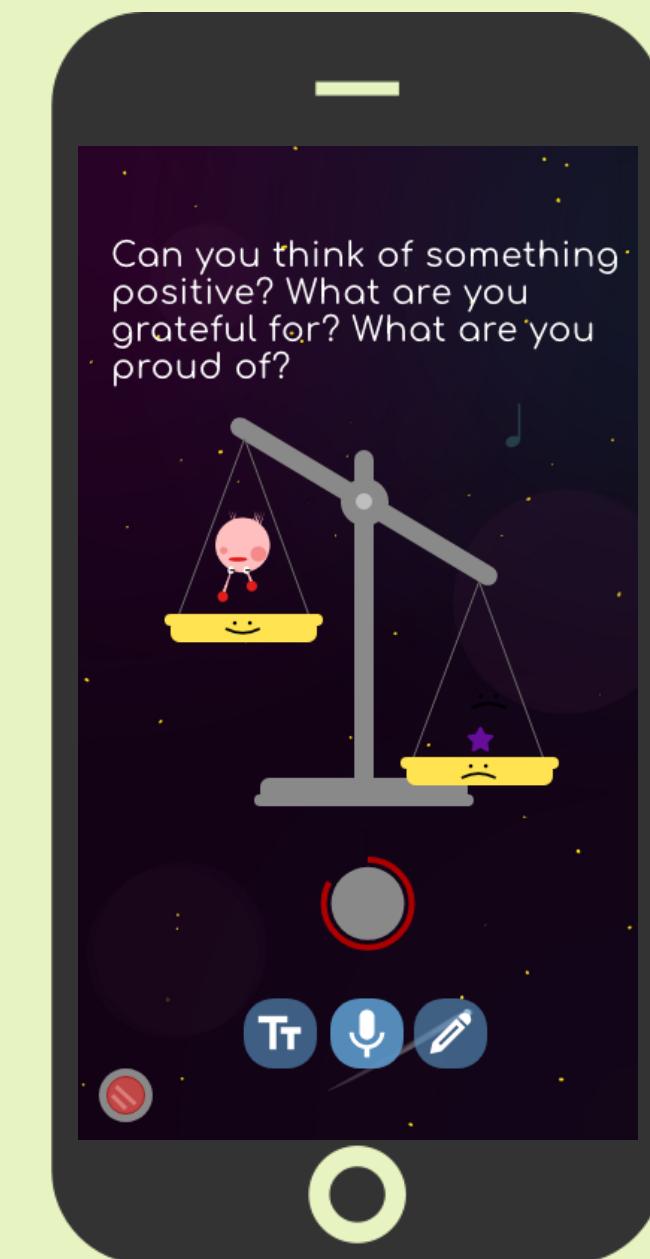


As you can see, we created our brand identity colours by combining colours from the three environments we have in our app. By doing so, we kept our brand identity rooted in nature, and consistent with the immersive experience the app will offer to the users.

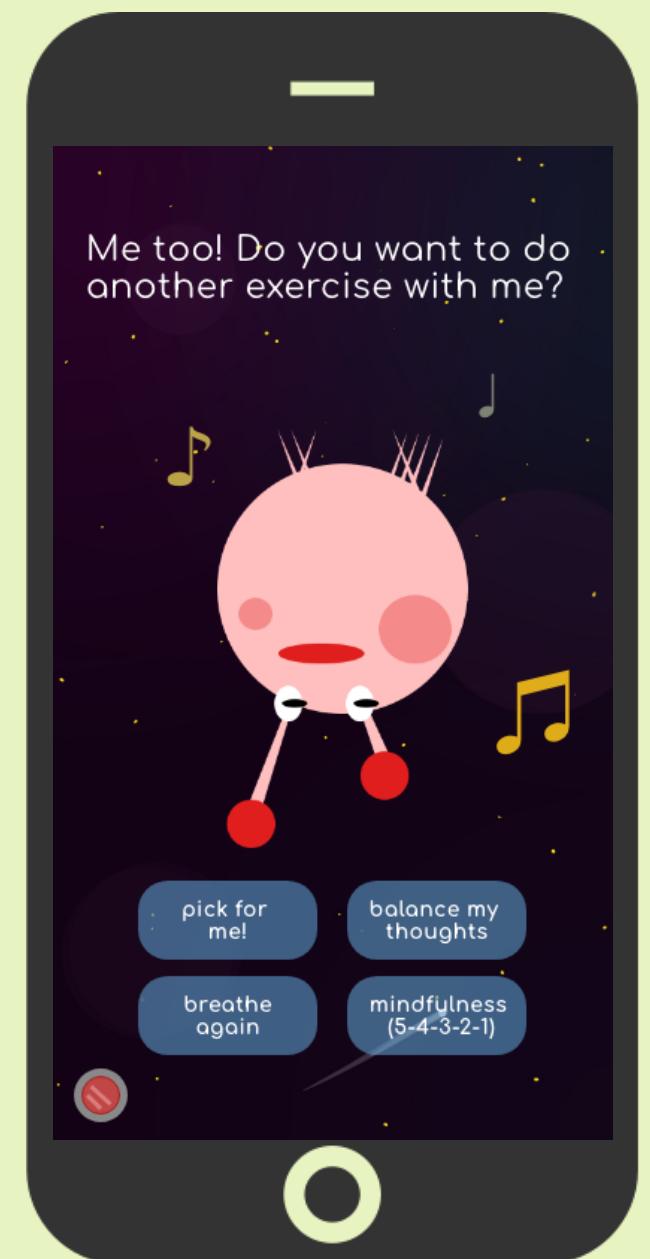
Modes of Interaction



Drawing



Voice



Multi-choice

Drawing from Jakob Nielsen's 10 general principles for interaction design, we wanted to ensure **flexibility** for the user (Mack and Nielsen, 1993). Particularly when in a state of panic, there must be as few barriers as possible for the user and maximum agency. By allowing multiple methods of input, we add also add a layer of customisability.

Interactivity

How have we utilised interactive elements in our project?

Components

Dropdown

This increases visibility by allowing the user to select what they see in a list

Toast

A toast like this will help the user
This tells the user extra information - important when first using the app.

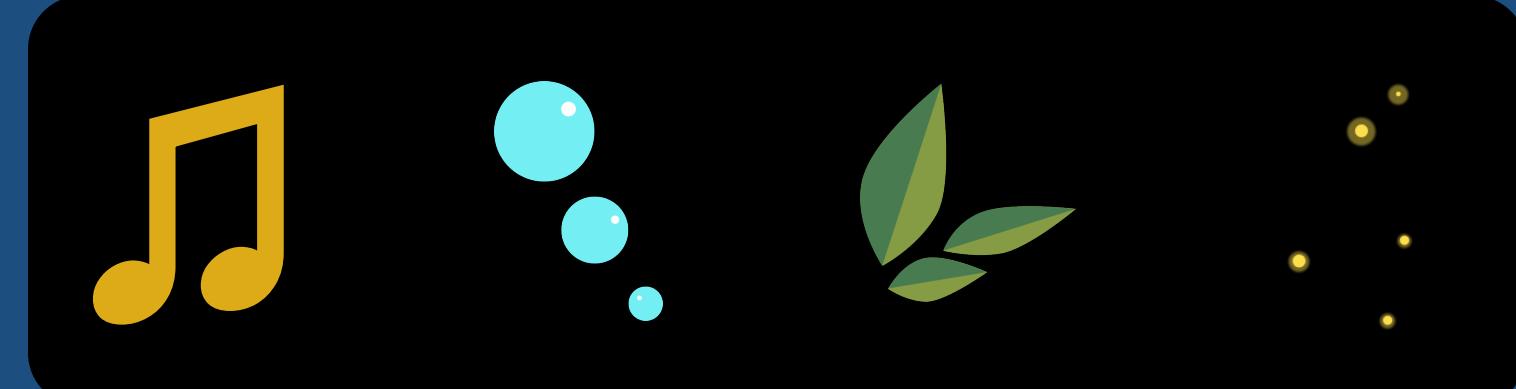
Buttons

This 'escape button' leads the user to external and personalised links for help

Buttons like this are 'action' buttons and allow for user input and navigation

Buttons like this allow the user to edit a component.

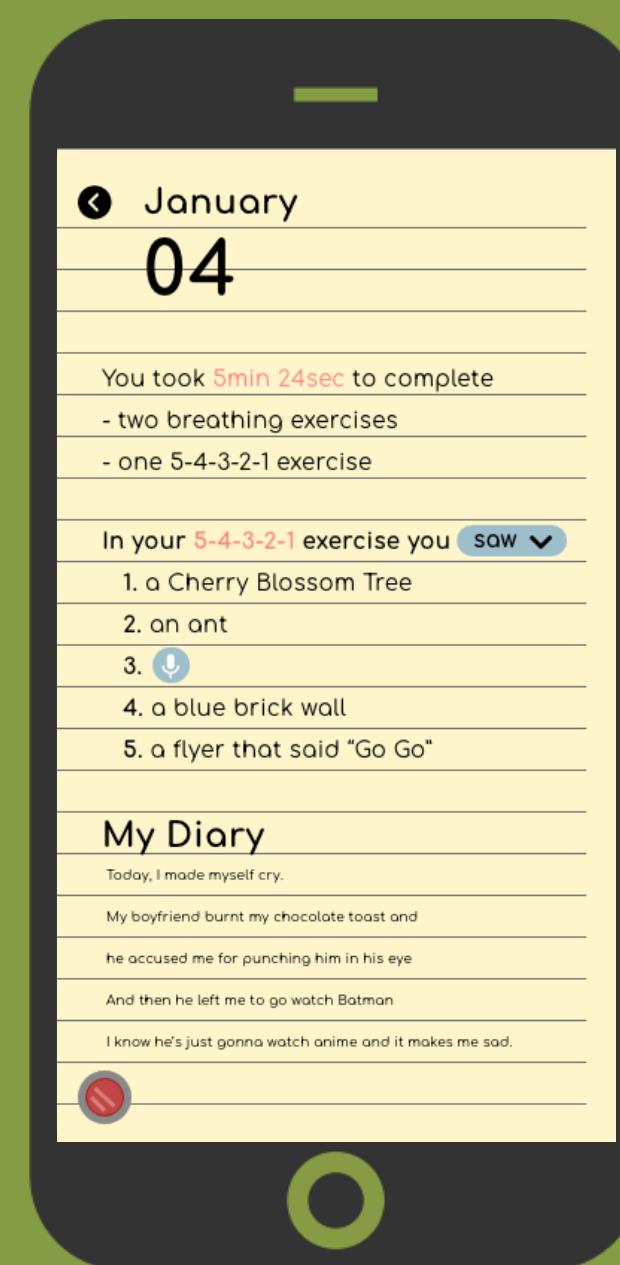
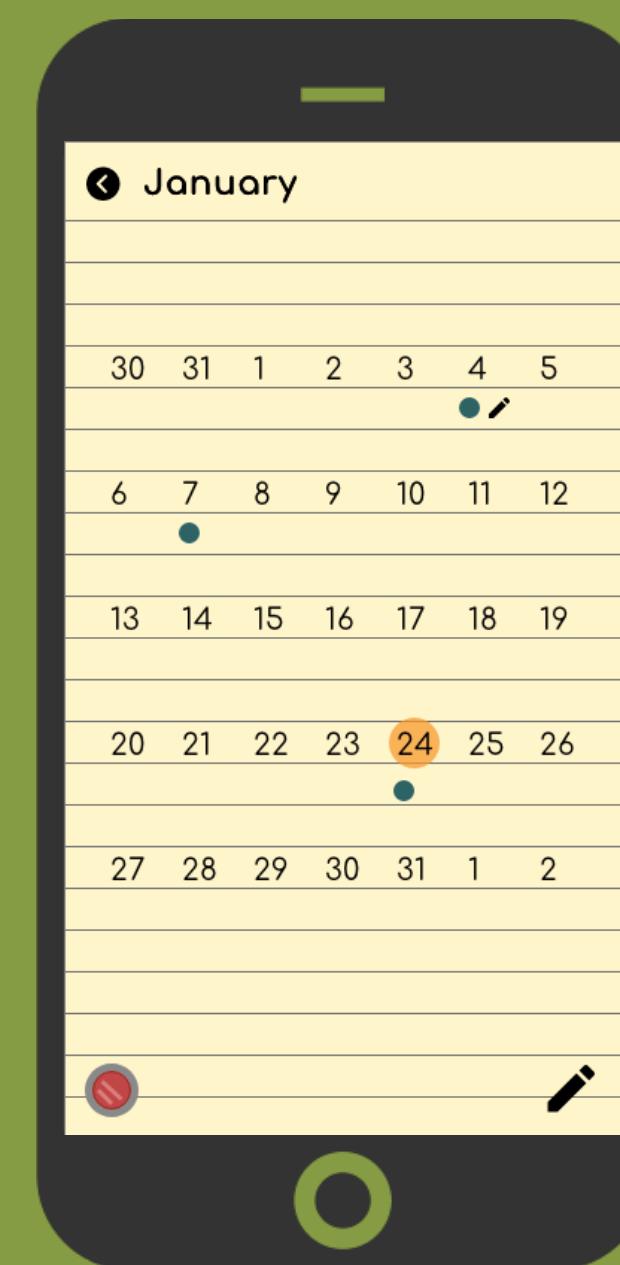
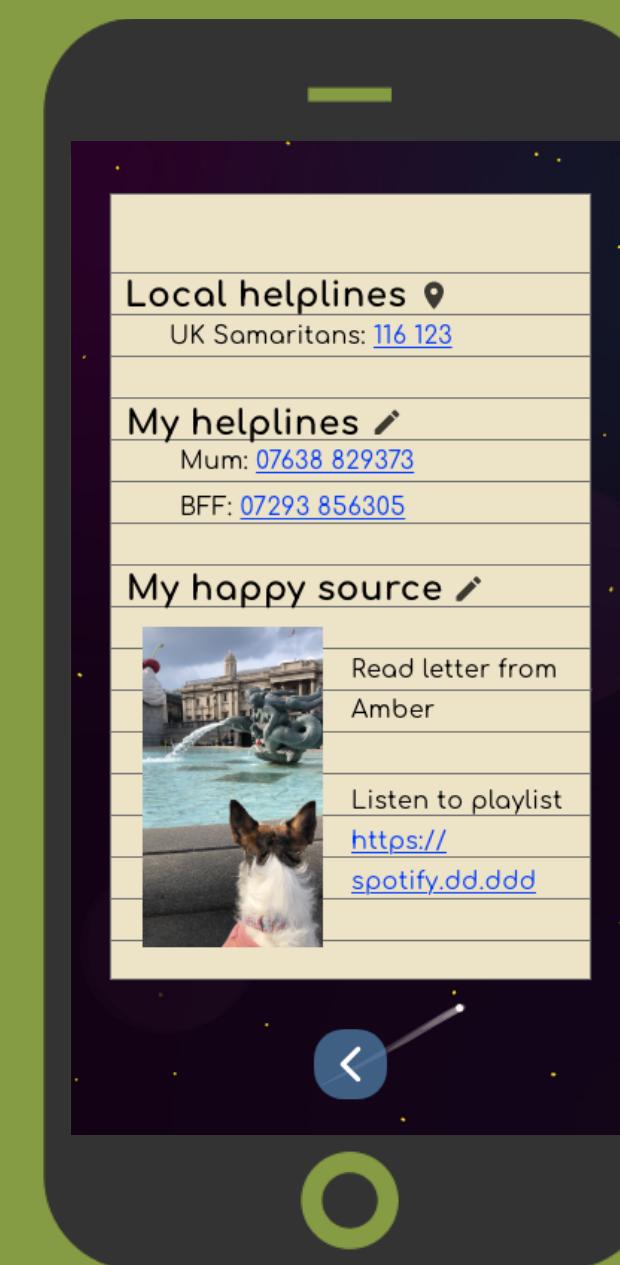
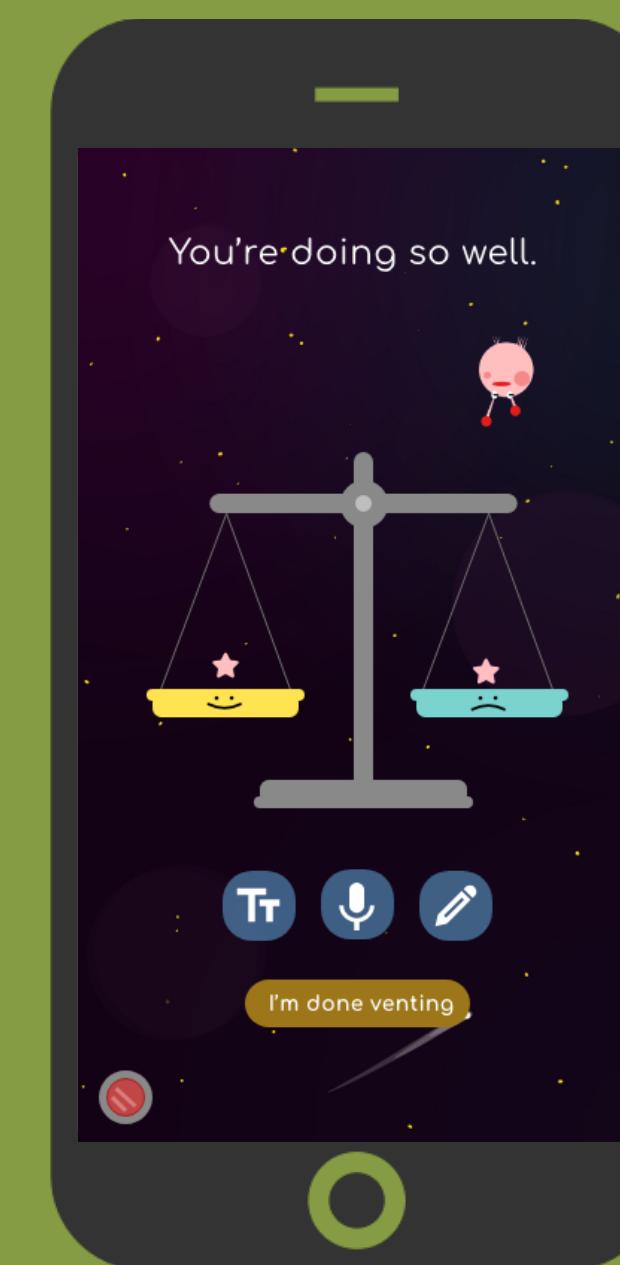
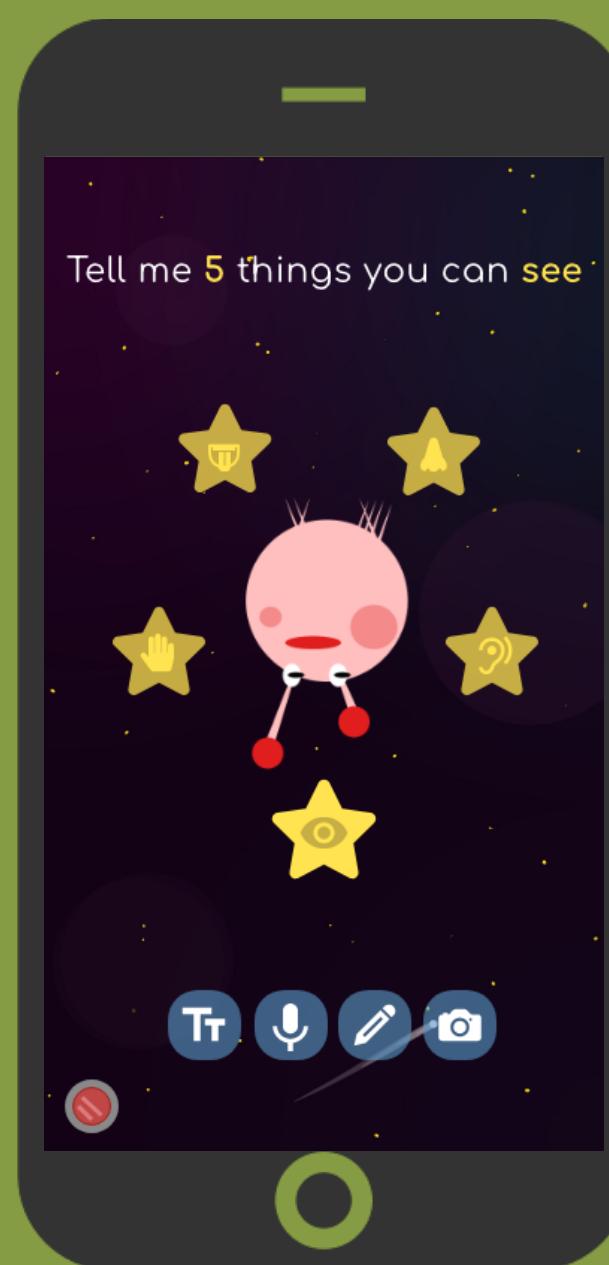
Gyroscope Elements



To add an immersive and interactive touch, certain components in the background will be able to move according to the phone's physical position, using information detected by the **gyroscope**.

Mechanics

Using online sources (Code.compartmental.net, 2022) (LearnEDU, 2017), we experimented with Processing to see whether we could code the Breathing exercise mechanic. Although we couldn't reach a viable result, we were able to understand the structure of the code and understand the variables.



5-4-3-2-1

Balance

Helplines

Calendar
(Month view)

Calendar
(Day view)

A screenshot of the Processing IDE. The code window contains the following Java code:

```
import ddf.minim.*;
Minim minim;
AudioInput in;
void setup()
{
  size(500, 500, P3D);
  minim = new Minim(this);
  // use the getLineIn method of the Minim object to get an AudioInput
  in = minim.getLineIn();
}
void draw()
{
  background(0);
  stroke(255);
```

The status bar at the bottom shows "Syntax Error - Bad identifier? Did you forget a variable or start an identifier with digits near 'if' if (key == 'k' || key == '1')".

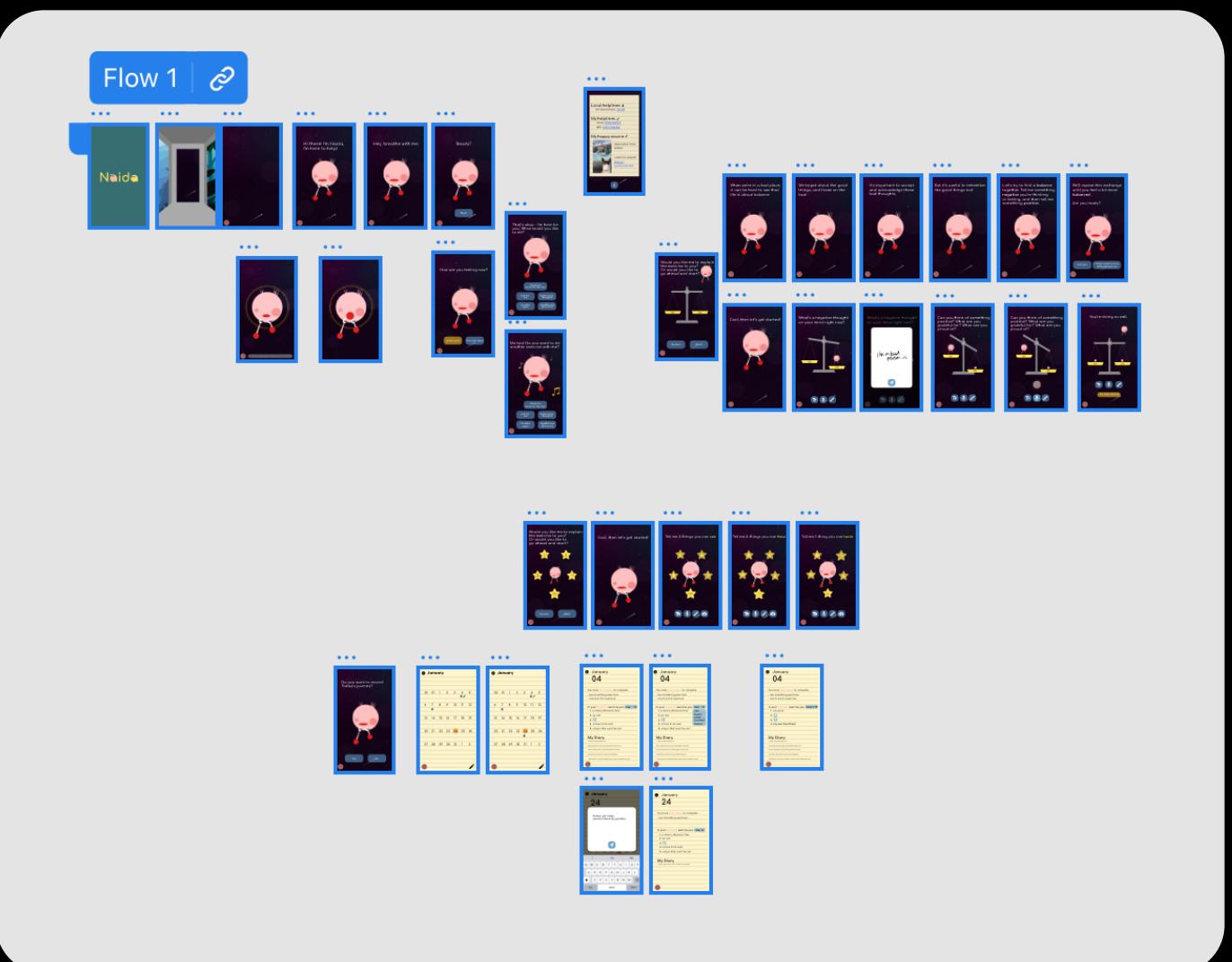
Fig 10. Experimenting with code
(Source: Screenshot of Processing)

The most interesting mechanic in our app is the breathing exercise. By detecting audio from the user's microphone, a circle is displayed that changes in size according to the amplitude and beat of the user's breath.

Once the size of this circle matches the indicator circle, the user's breath is 'matched' as you can see in the prototype walkthrough video.

Our initial prototype

Prototype Wireframes



Prototype Walkthrough



Naida



With Your Help We Can

- Add more languages/environments & expand worldwide
- Receive professional input from psychologists & psychiatrists
- Improve the Companion's responsiveness with machine learning
- Collaborate with biometric technologies
- Conduct user testing using current prototype
- Develop a solid back-end databased to secure personal data

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