



A virtual oasis designed for only one

**Virtual** **Application** **3D**

**Period** 2021.01 - 2021.03, 2022.10 - 2022.12

**Roles** Planning, Interview, Logo design, UX/UI design, 3D Modelling, Unreal level design

**Tools** Photoshop, Blender, Unreal Engine

**Collaboration** A clinical and counselling psychologist, an art therapist, and a Unreal developer

## BACKGROUND

Where is an **oasis just for me** that I can **go at any time?**

\* Oasis : a calm, pleasant place in the middle of somewhere busy and unpleasant



## Release the stress at the Virtual Space

Since the COVID-19 pandemic, people's need for healing places to relieve stress has increased. The place has expanded from personal spaces such as homes to quiet nature and virtual spaces in games.

## USER RESEARCH

### I need a **special and private healing space**

I want to have a 'my own healing space' where I can only focus on myself without other people.

### I hope to understand **what my mind needs**

I want to know my state of mind and what I need from myself. I am also considering seeing a professional for psychological counseling.

### I need a **shelter I can go to anytime, anywhere**

It's hard to heal my mind in the hustle and bustle of everyday life. I need a place to care for my mind regardless of time and place.

## SOLUTION

**OWN**  
a dedicatedly tailor-designed virtual space  
an innermost world where the user can introspect the self and release the stress



People need each territory for their soul  
“Inner Zone – Secret Garden”

– Julia Kristeva –

The words of French philosopher, Julia Kristeva, inspired our design concept to elaborately visualize the abstract and invisible inner world as a boundless virtual space. We expected that this virtual world, without temporal and spatial constraints, would become an indicator to facilitate introspection and self-regulation whenever the user needs it.

In addition, OWN is filled with various therapeutic visual and spatial elements that have been researched in color psychology, environmental psychology, and art therapy. These elements are necessities for the user's mental well-being, suggested by in-depth psychologist analysis.

## THE OWNER

For the design of the innermost personal space, OWN, our researchers of a designer and two psychologists (a clinical and counseling psychologist and an art therapist) recruited users who were looking for their own therapeutic space. Recruitment was via online communities and messenger, and three users were in contact with the researchers. We refer the users to **OWNer**, an owner of OWN. Our target group was those having emotional difficulties in their daily lives but did not have a severe problem requiring clinical intervention. The details of three OWNers who took part in our project and their needs are described below.



**Mindelle**

Age 27  
Artist



**MYN**

Age 25  
Graduate  
Student



**T**

Age 24  
Undergraduate  
Student

I want to express myself freely

I need a place to focus on myself

I'm afraid of being alone

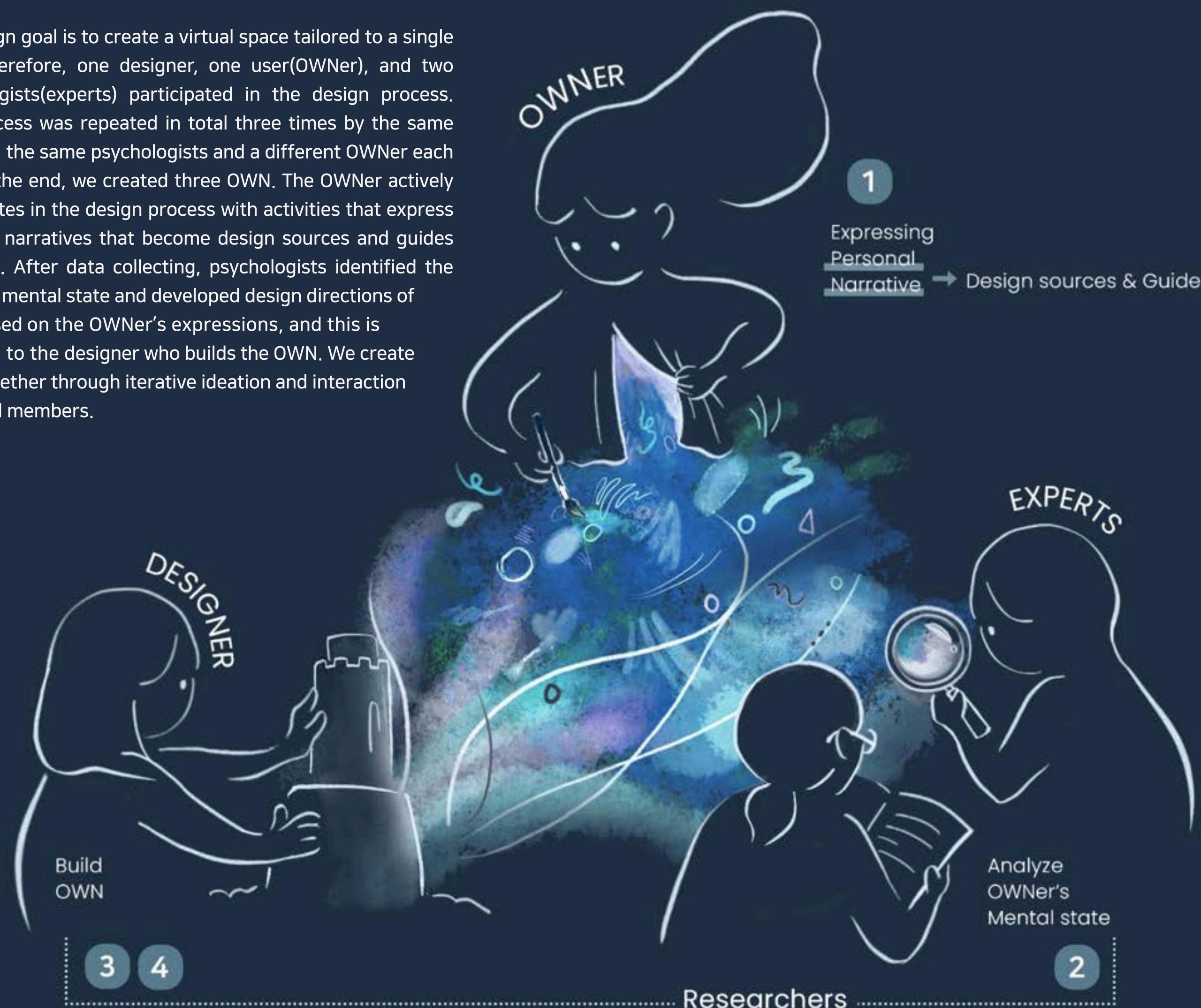
I need a space that's 'just for me'

I feel peaceful when I'm alone

I need a place to relax

# DESIGN PROCESS

Our design goal is to create a virtual space tailored to a single user. Therefore, one designer, one user(OWNER), and two psychologists(experts) participated in the design process. This process was repeated in total three times by the same designer, the same psychologists and a different OWNER each time. In the end, we created three OWN. The OWNER actively participates in the design process with activities that express personal narratives that become design sources and guides for OWN. After data collecting, psychologists identified the OWNER's mental state and developed design directions of OWN based on the OWNER's expressions, and this is provided to the designer who builds the OWN. We create OWN together through iterative ideation and interaction across all members.



## 1 Data collection from the user

\* Roles of the designer

**Pre-survey question development** with Experts

**Expressive Writing**

Each user expressively wrote about themselves and their environment.

**Interview Questions development** with Experts

**In-depth Interview**

Each user told us how they understood themselves and their environment through the 1:1 in-depth interview.

**Drawing (H-T-P Test)**

Each user drew 'My home' and 'Me in the room'. This is an adaptation of the H-T-P test used in art therapy.

**Image Collection**

Each user collected images that made them feel positive or negative emotions. They also provided us with photos of the rooms they currently live in.

## 2 Psychological Analysis

Based on each user's data, our psychologists (a clinical and counseling psychologist, and an art therapist) prepared a psychological analysis report and proposed a design requirement for each user's mental well-being.

## 3 Sketch OWN

**Design Concept Guide**

**Visual Mood Board**

**OWN Collage Sketch**

A designer sketched OWN based on each user's data and experts' analysis reports and suggestions. The design was finalised with feedback from each user and experts.

## 4 Build OWN

**3D Modelling**

**Unreal Level Design**

**c# Scripting**

A designer created OWN in 3D virtual space using Unreal Engine. And a Unreal developer to implement some interactions features in C# scripting.

# DESIGN PROCESS

Details of the design process, including **Mindelle's OWN** design example.

## Expressive Writing

- Researchers(a designer and psychologists) designed questions from which OWNers could easily derive their personal narratives.
- OWNers expressively wrote down how they perceived and felt the relationship between **self and the environment**.

What situation does make me feel comfortable?

When I feel anxious?

How I think about my room?

**How my persona looks like?**

Smiling face.  
Even if someone is rude to me, I smile.  
I'm afraid to be awkward so I just put up with me.



## In-depth Interview

- The in-depth interview (about 2 hours) was conducted via Zoom to ensure the OWNers' anonymity.
- The Interview questions were divided into **Common Questions**, which all OWNers were asked the same, and **Additional Questions** designed individually based on the each OWNer's expressive writing.
  - \* How to define yourself: self-image
  - \* The way to escape from stressful situation
  - \* Repetitive behavioral patterns
  - \* Psychological reactions to various visual elements (colors, figures...)
  - \* Feelings and thoughts about own room and possessions.

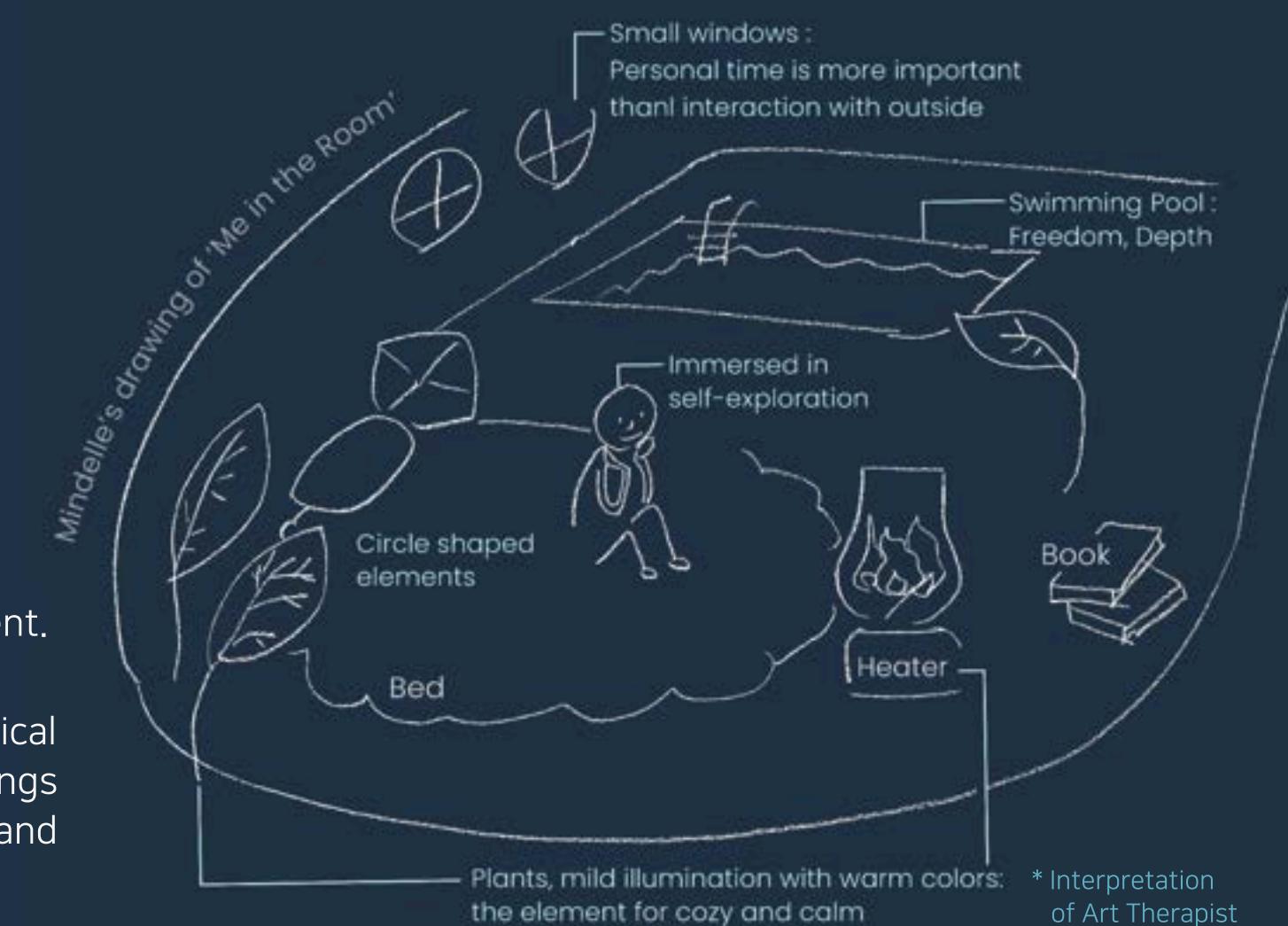
**Example of Additional Question**  
**How did you realize that you keep a smile?**

When I was a student, a teacher said, "Why do you smile when you're talking about something that's upsetting?" My parents also say I smile too much. I thought I should be nice to everyone. I want to fix it, and I think I'm getting better these days.

## Drawing

This was a variation of the **House-Tree-Person(HTP)** test, used in art therapy

- OWNER drew '**Home**' and '**Me in the Room**' to express how s/he felt about the inner self and the outer environment.
- An art therapist interpreted psychological and visual elements in OWNER's drawings (e.g., structure and scale of space) and reported design suggestions for OWN.



## Design Suggestions for Mindelle's OWN

- A structure that can be protected from the outside and left free inside is essential
- A balance between immersion in personal exploration and external communication is necessary: Positioning the clock to induce self-regulation of immersion.

## Image Collection

- OWNers collected images that make them feel good or bad, such as colors, objects, and interiors.

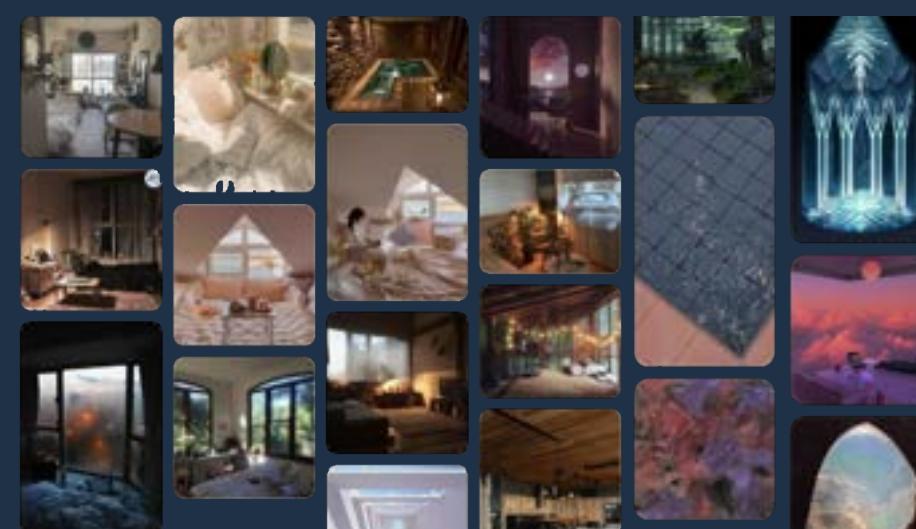


Image collections : Preferred places

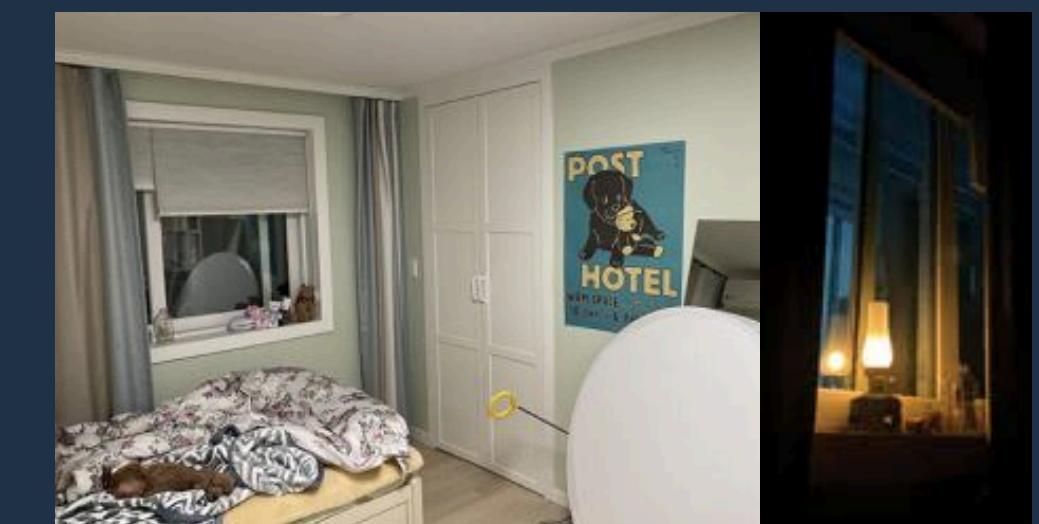


Photo of her room

# DESIGN PROCESS

Details of the design process, including **Mindelle's OWN** design example.

## Psychological Analysis

- Psychologists analyzed in depth the inner mental state and the behavior of interaction with the external environment based on self-expression of the OWner.

### Clinical and Counseling Psychologist

Provide **psychological analysis report** as

1. Daily Life
2. Social Relationships
3. Strengths/Weaknesses
4. Psychological Needs
5. Essential Interventions



### Art Therapist

Interpret drawings to understand OWner's psychological reacting patterns to visual and spatial elements.

**Suggest visual design elements** based on a wide range of art therapy knowledge, such as color therapy.



## OWN Concept Guide

- Based on the results of the psychological analysis, A designer wrote **design concept guide** of OWN for each OWNers. The guide summarizes the OWner's various expressed personal narratives, analysis reports, and design suggestions from psychologists.

### Mindelle's OWN concept guide

#### Summary of psychological analysis

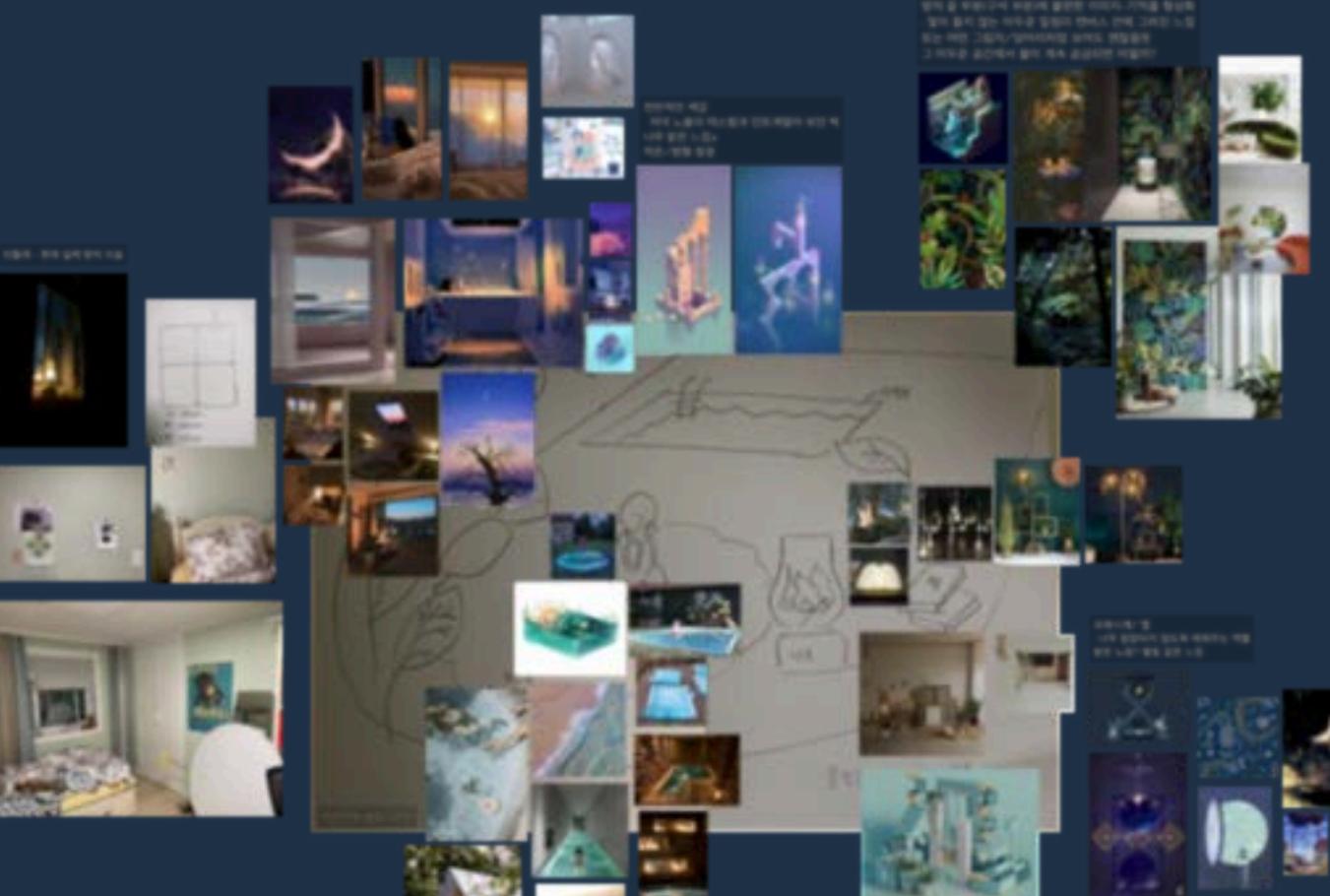
- Own time and space is the most important : Bed, Mood lighting, Diary, Book
- Too much pay attention in other's opinion Small window: aim loose relationships
- Enjoys thinking with the mood lighting in calm atmosphere of Night ~ Dawn time
- Desires to express pressured emotion : Express by art / Dreaming freedom

#### Requisites for Mental Well-being

- The space where could only focus herself : Dark green or blue can imagine the deep sea
- The most comfortable space, bed is a door of deep the thought
- She can swim in the wide sea of thoughts
- Should keep balance not sink into the abyss : Clock - an alarm when to get out of there

## Visual Mood Board

- The designer made a visual mood board based on the concept guide. The board contains images collected by OWNer, as well as various visual references collected by the designer.



Visual Mood Board

## Collage Sketch

- The designer establishes the overall visual concept of OWN, the virtual inner space, as a free and limitless dream world without the physical constraints of the real world.
- Moreover, the designer mapped symbolic visual elements that would fill OWNer's inner world, which is requisite for better mental well-being as well as those of OWNer's preference. Those elements based on knowledge of environmental psychology, color psychology.
- The sketch reviewed by psychologists and OWNer. The Psychologists checked whether the sketch reflected their suggestions without distortion, while OWNers gave comments based on their feelings about it and preferences.



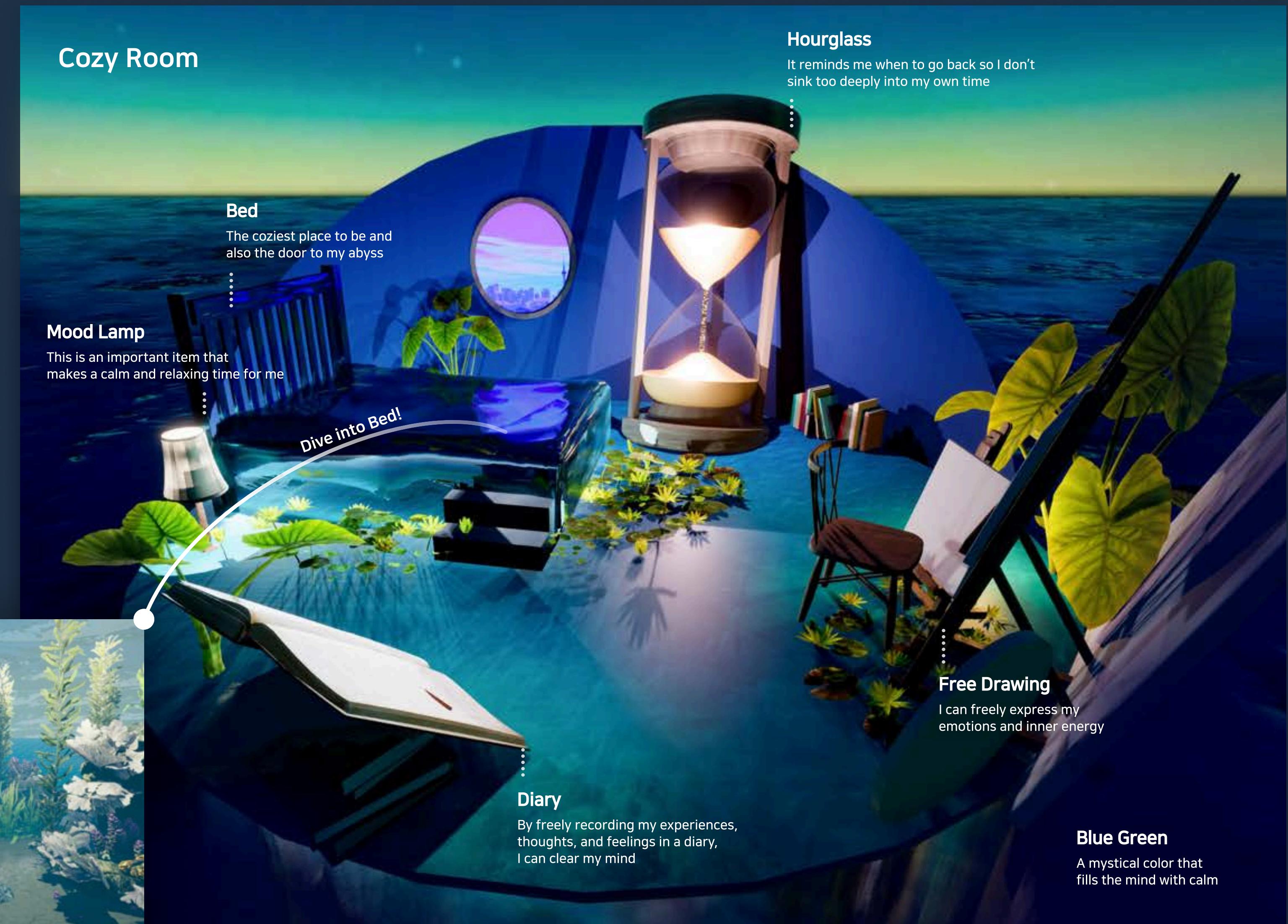
OWN Collage Sketch

## DESIGN PROCESS

Details of the design process, including **Mindelle's OWN** design example.

### Build OWN for Mindelle

- OWN, a 3D virtual space, was developed using the Unreal Engine, a game engine. It supports real-time rendering, making OWN come alive with 3D motion, such as wind and water flow, and allowing the user to explore the virtual world freely.
- OWN consists of two rooms in total. One is a **Cozy Room** with walls or doors that separate it from other rooms. The **other is an Infinite Space** that can be immersed in the user's contemplation. The division of OWN into two levels is intended to allow the user to go deeper into their inner self. In addition, a **simple text annotation** appears near essential visual symbol elements so the user can reflect on the self.
- To build OWN, a programmer was invited to work with the designer to create moving and interacting features by C# scripting. The designer created 3D assets in Blender and some supported Unreal assets such as <Megascans> from Quixel and <Corals 2> by DmitriyDryzhak. Royalty-free licensed pieces of music were used. The build supports Windows and is played using a keyboard and game controller.



[🔗 Video of Mindelle's OWN](#)

# OWN for MYN

## Cozy Room

### Bunch of Negative Memories

Keep memories, both happy and painful, together. To heal wounds, taking care of them is better than ignoring them

...



### Evening Sunshine

It gives me positive energy and makes me look back on my day

### .... Brown and Soil

They help reduce obsessiveness

Go for a walk !



### .... Music

I make music and play guitar to express what I want to say. It's also a moment to forget about my worries



### Big Window

Being in my own space too long can be lonely, so I get energy from interacting with others

...

### Infinite Space



⌚ Video of MYN's OWN

### Gradients and Intermediate colors

Everything has a middle ground as well as two extremes

...

# OWN for MYN

## Cozy Room

© Video of T's OWN

### Strong Sense of Control

It's easy to blame herself when she are stressed or fail

 She needs to practice recognizing what she has contributed and the range of what she can control

### Pool

The calm water brings peace to my mind and I can reflect myself like a mirror

### Bed

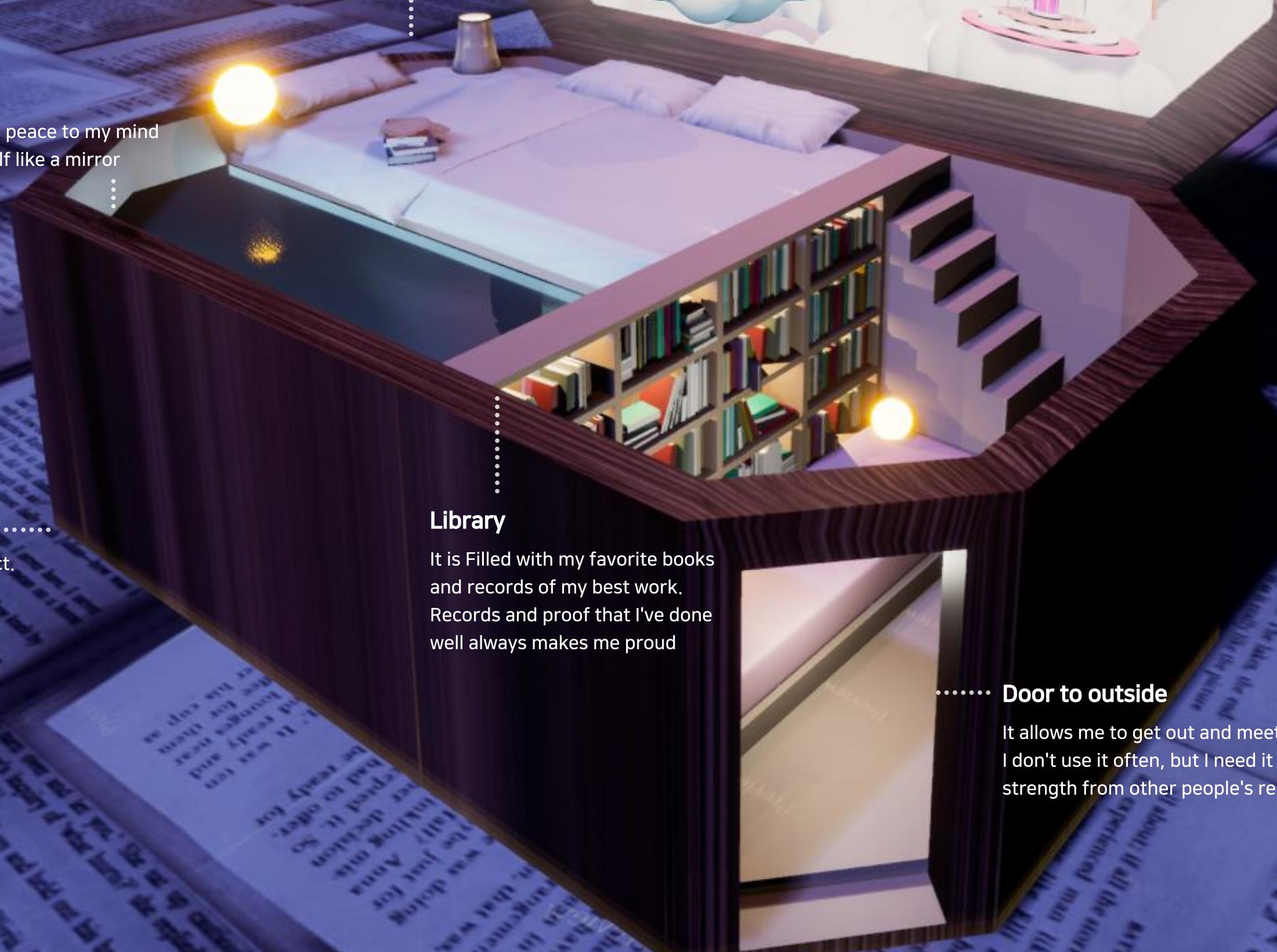
My happiest moments are when I'm relaxing in a fluffy bed but I have to be careful not to be there too long

### Treasure Box .....

Filled with things I value and want to protect. I can feel secure by keeping my preferred appearance of self

### Library

It is Filled with my favorite books and records of my best work. Records and proof that I've done well always makes me proud



### Door to outside

It allows me to get out and meet other people. I don't use it often, but I need it because I get strength from other people's respect

### Infinite Space



Enter the mirror!

# RESULTS

After each user was provided with OWN, a one-hour post-interview was conducted individually via Zoom. In the post-interview, we asked how OWN affects their perception of mind and how they interacted with OWN.



Mindelle

## Introspect into the mind

"It gave me a chance to **reflect on myself** I hadn't thought of before."

"Necessary **elements suggested by the expert** in OWN help me to **think objectively** about myself".



MYN



T

## Peaceful and Heal the Mind

" When I feel hard or stressed, OWN **comes to mind to soothe** me."

"OWN is where I can **go to recover** when my heart is broken by others. I want to **keep it with me** at all times."

I **turn to OWN** when I want to be alone or when I'm exhausted. It's like finding **my peace of mind** and my lost **childlike spirit**.

## Needs

"I hope to see **other people's OWNs**, not just mine. I'm curious about their needs and how they look."

"It might be **more accessible** with mobile approach."

"I would like to **modify some parts** **myself** to have the look I want."

I want to **interact directly** with the symbols in OWN, like activating the playground equipment myself.