



DECO2200 – ASSESSMENT 3

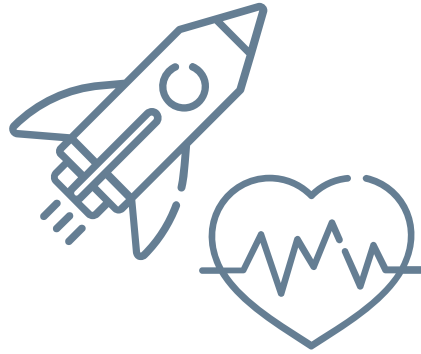
Final Concept Presentation

Cyrilla Lowas 490517105

Luisa Hadinata 490457867

Valencia Yun 490522970

Design Concept



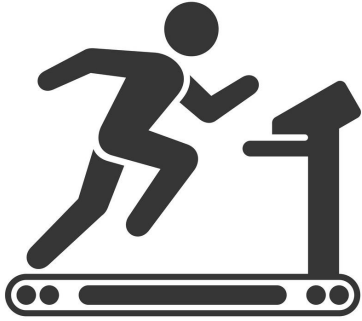
Health in Space

Maintaining muscle and bone health during mid-flight due to microgravity

.....

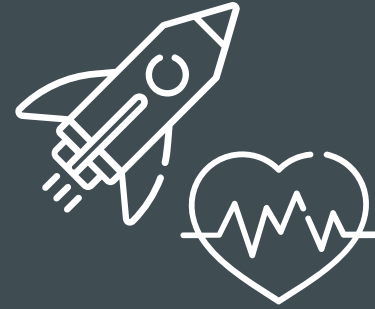
Design Problem

.....



Fitness Technology

Workout results,
efficiency of use, user
satisfaction



Health in Space

2+ hours of exercise,
efficiency of use, user
satisfaction

Design Process

DISCOVERY

Research Into
problem space

- General research into problems with space
- Research potential problems for commercial space travels

REFRAMING

Analyse research
Narrow down the
problem scope

- Issues with existing fitness technology
- Issues with health in space
- Analyse which specific problem to further develop solutions for

IDEATION

Explore Conceptual
Solutions

- Ideate concept solutions for the problem
- Discover potential devices that could be used

REFRAMING

Narrow Down Solutions

- Summary and key findings of each solutions
- Weight the pros and cons of each solution idea

TESTING

User Testing,
Prototyping

- Conduct user testing
- Gather insights
- Prototype screens that demonstrate how the user will interact with the device

REFRAMING

Evaluate, redesign

- Evaluate user testing insights
- Reflect upon the design through user feedback
- Redesign prototypes

Decision Matrix

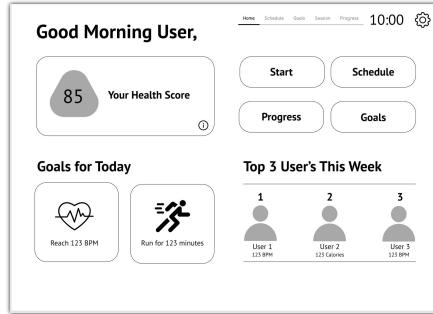
3 Concepts



(Netflix Show Black Mirror Pushes Boundaries Of Virtual Reality, 2019)

Concept 1

VR exercise device



Concept 2

SMART goal system

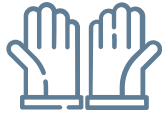


Concept 3

Virtual Pet Raising Game

Highest potential

Strength



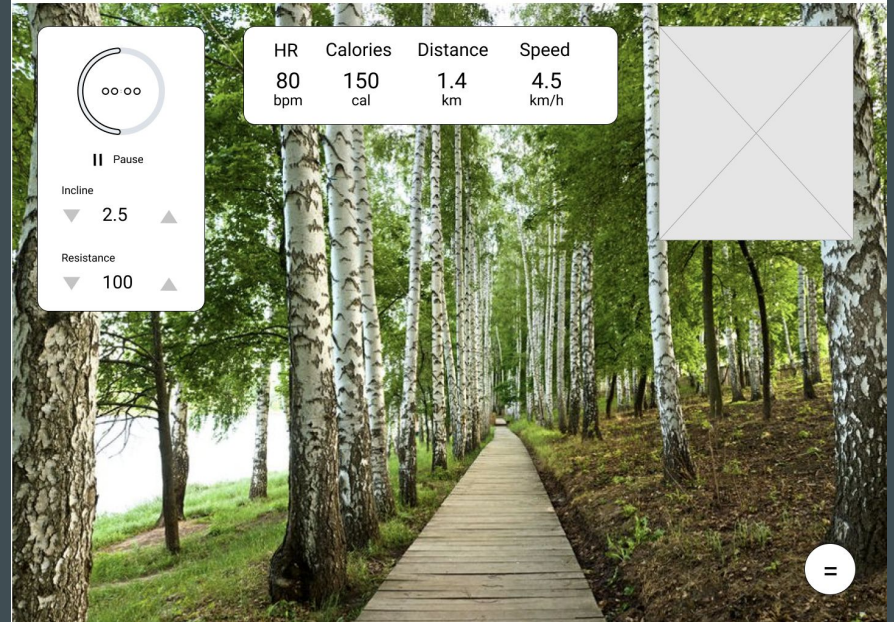
Engaging Experience

great potential in creating a more **engaging experience for workouts**



Motivation

immersive VR experience gives **excitement** to them and **motivate** them to do exercise in space.



First design of virtual reality exercise device



Weakness



Interaction

lacks a variety of gesture interactions

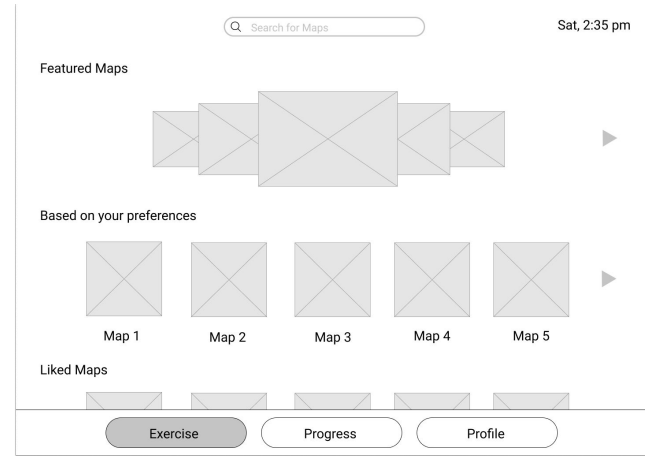
Aesthetics

lacks uniqueness

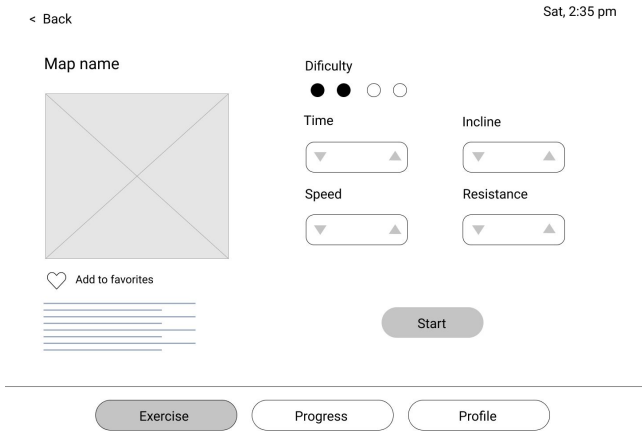


DESIGN MATRIX: CONCEPT 1

DIFFERENT MAPS



It just looks bland...



DETAILED INFO OF MAP

Redesign

User Interface



("Female spy | Detective aesthetic, Spy girl, Heist society", 2020)

Concept

A spy in a secret agency



("Newretro.Net", 2020)

Theme & Style

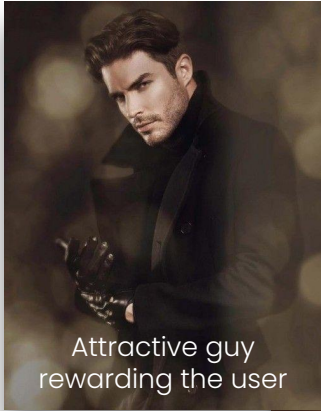
Cyberpunk world with
neon colours



("Resonance: Samsung's Design Exhibit at Fuorisalone 2019", 2020)

Interface

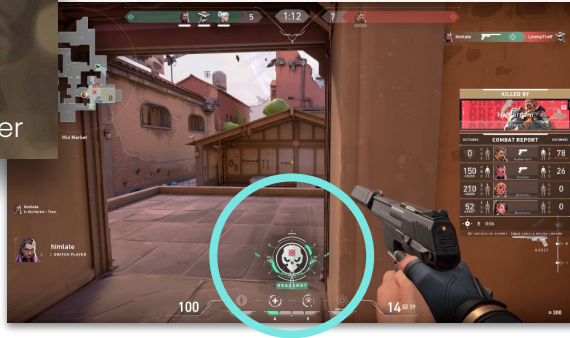
Responsiveness to
interaction; sense of
accomplishment



Attractive guy
rewarding the user

("A Quill In Her Quiver",
2020)

Valorant interface animation
when user hit the target



("Pin on 二次元", 2020)



Beat Saber user interface

("I will coach you to
attain high scores in
beat saber", 2020)

Interface

Rewarding Results
Sound & Graphics
Interface Experience

Features



("Google's New Phone: A Lesson In The Dangers Of Gesture-Heavy UIs", 2020)

**Gesture
Navigation**



("The Busy Man's Workout", 2020)

Types of Workouts

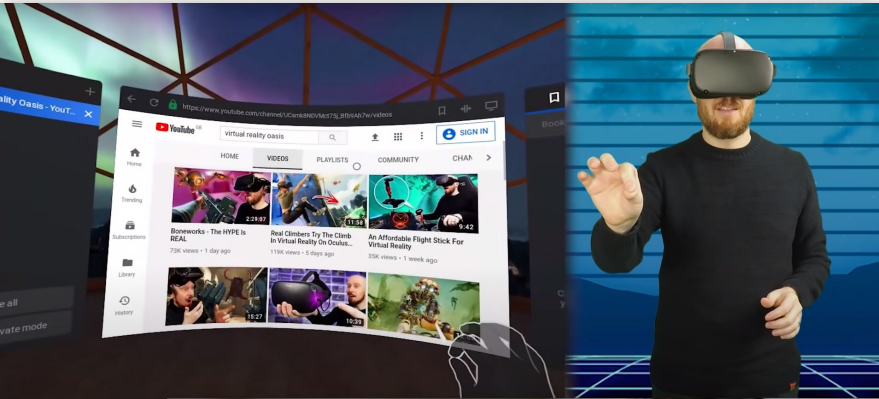


**Rewarding
Experience**



**Immersive
Experience**

Pinching to click and navigate



("Oculus Quest Hand Tracking Is HERE", 2020)

Gesture Navigation

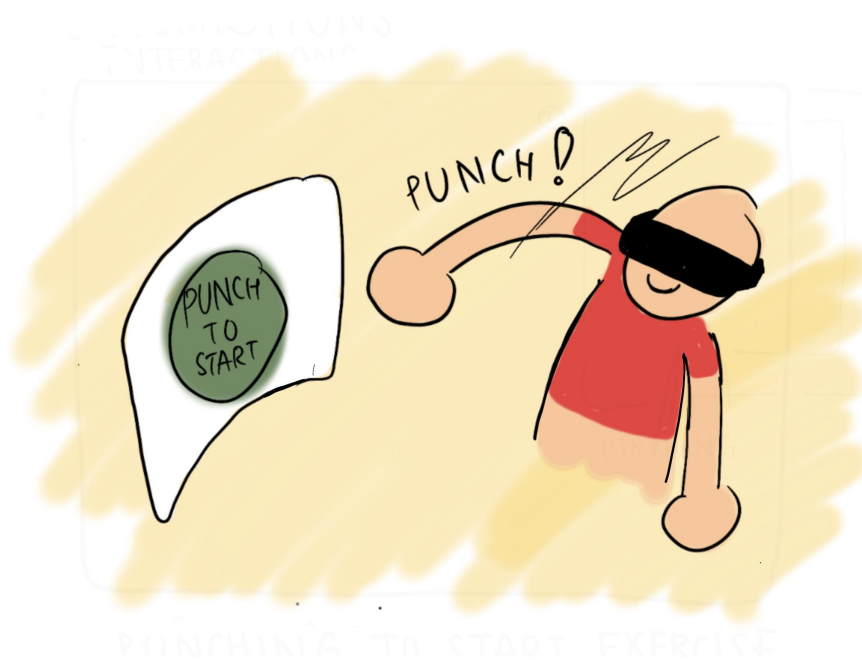
From *mouse click* to
pinching



(technology from Oculus Quest 2)

Hand gesture recognition

Gesture Navigation



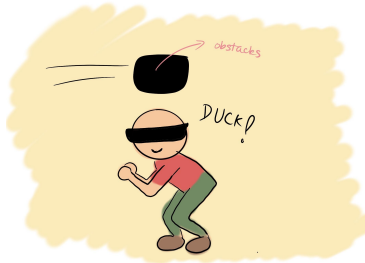
Punch to Start

Creates excitement
Gets user pumped up
Prepares them to get active



("Rise of the human exoskeletons", 2020)

Workouts



EXOSKELETON

simulate
gravitational
pressure

VARIETY OF WORKOUTS

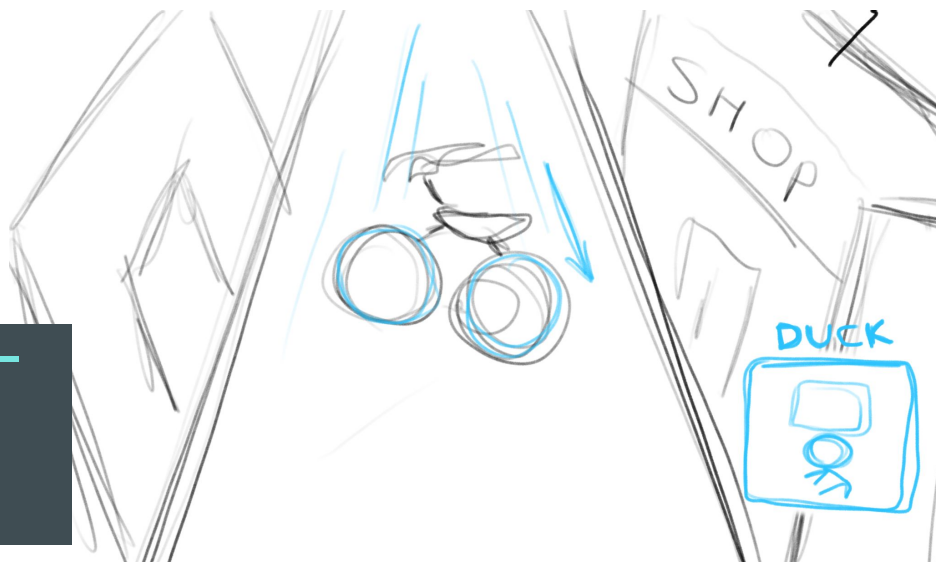
Ducking
Jumping
Throwing
Punching



TV Show *"Hole in the Wall"*

("Hole in the Wall (TV Series 2008–2012) - IMDb", 2020)

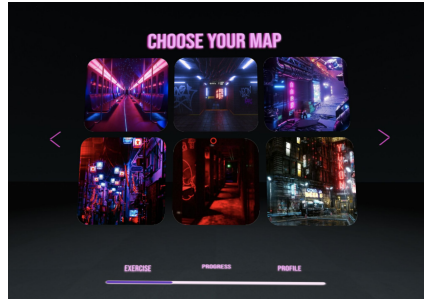
User ducking the bicycle
as shown in the **diagram**
on the bottom right
corner



Wireflow



Exercise, Progress, Profile are on the same hierarchy



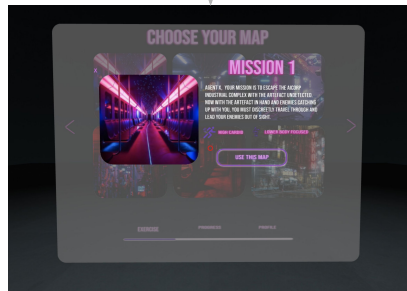
EXERCISE PAGE



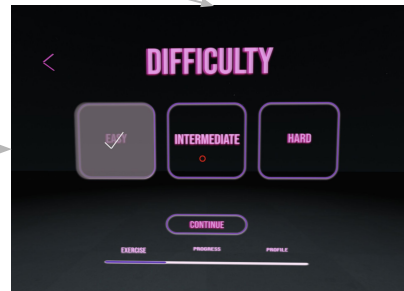
PROGRESS PAGE



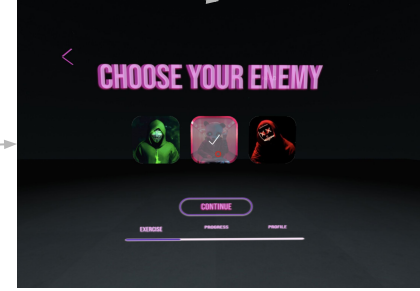
PROFILE PAGE



MAP



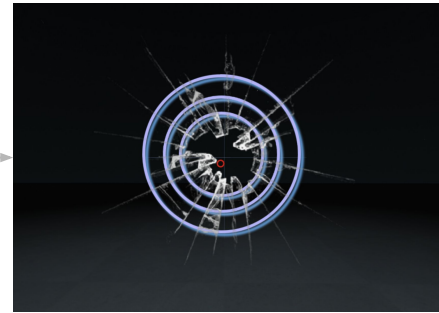
DIFFICULTY



ENEMY



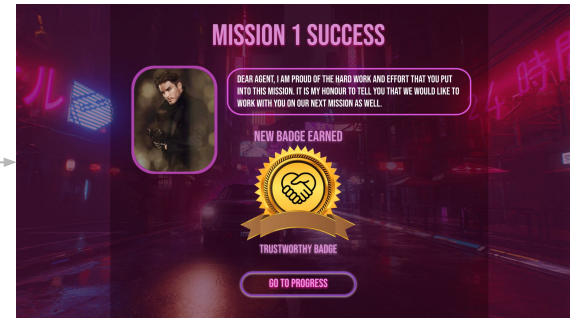
PUNCH TO START SCREEN



WHAT THE SCREEN LOOKS LIKE AFTER PUNCHED



MISSION



REWARD SYSTEM

User Test



.....User Testing Methods.....



Think-Aloud



Interview



**Heuristic
Evaluation**

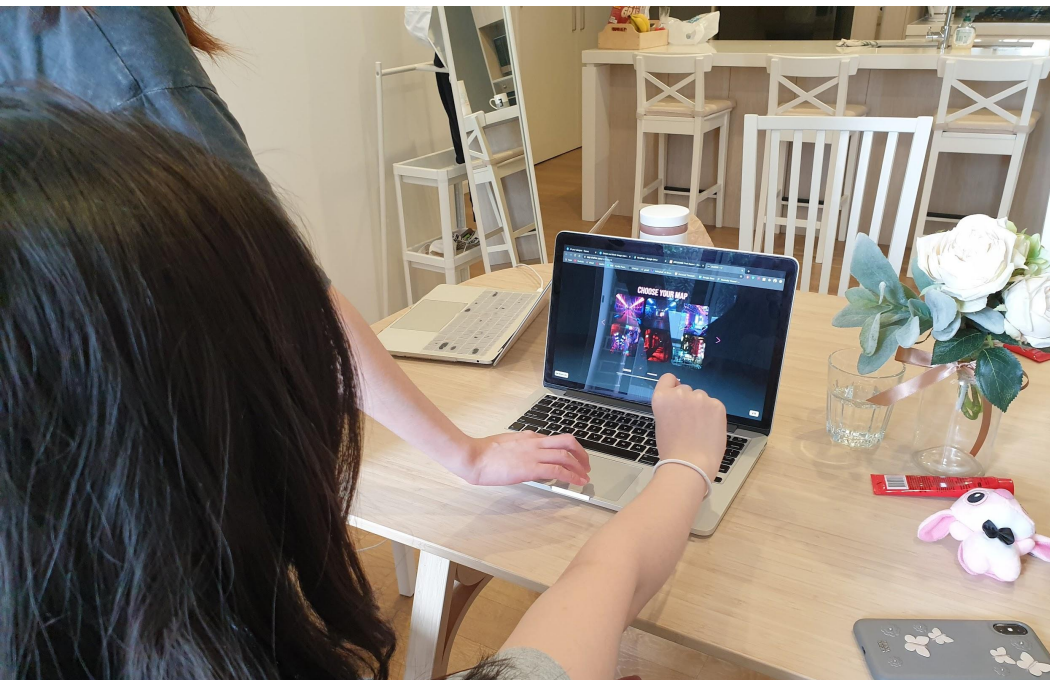


SUS score

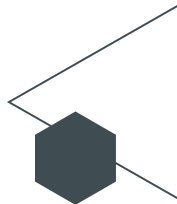




User Test Set-Up



Users were asked to **use their hands to navigate** through the VR, and **we controlled the trackpad** to simulate a gesture navigation. We would also **read the secret agent's speech** in the textbox and played the **sound effects** as the user went through the different screens.



Insights & Reflections

Visibility Issue

Speech bubble



Triangle obstacle

Heads Up
Display

"At first, **I couldn't understand what the triangle thing means** and what the bars [for dodging] indicate. Maybe you **need to put in more context.**"

- Jess

"The agent's **speech bubble is not visually impactful enough.**"

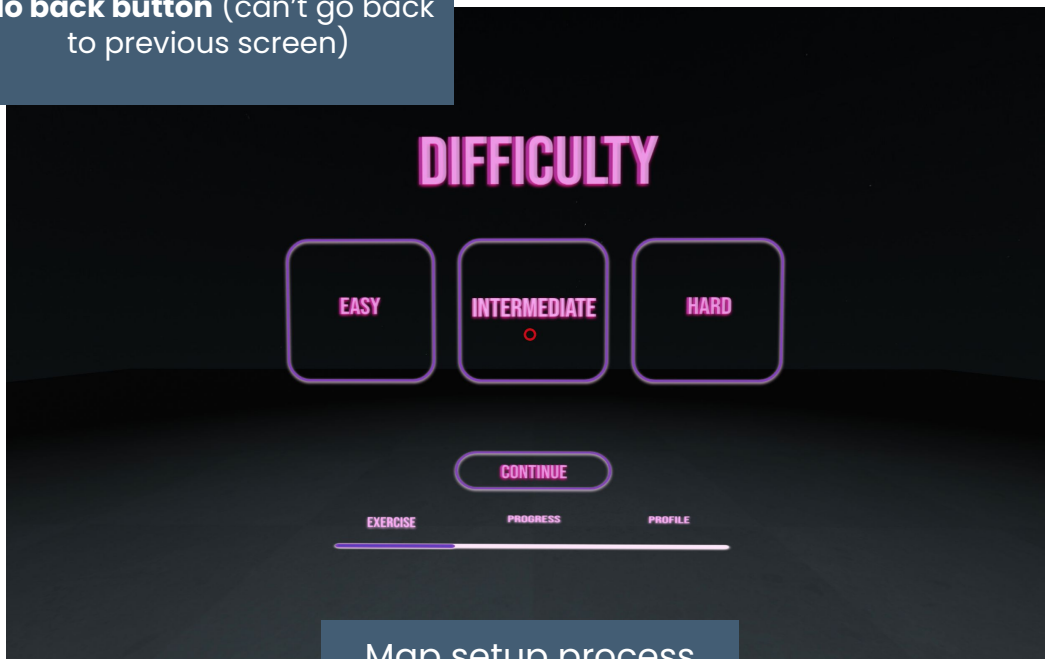
- Victoria

"I'm not sure what this is... **Is it the score or what?**" (referring to the heads up display)

- Elena

User Control and Freedom

No back button (can't go back to previous screen)

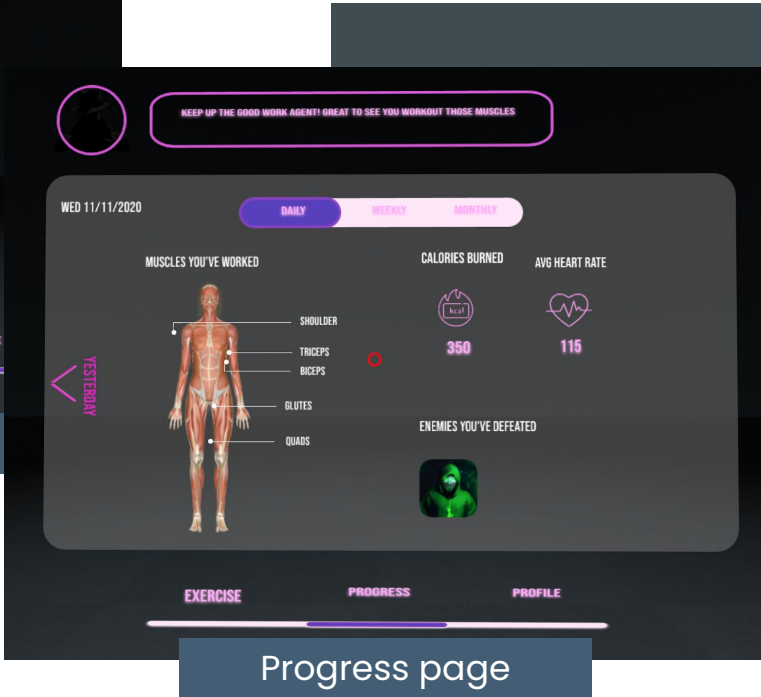
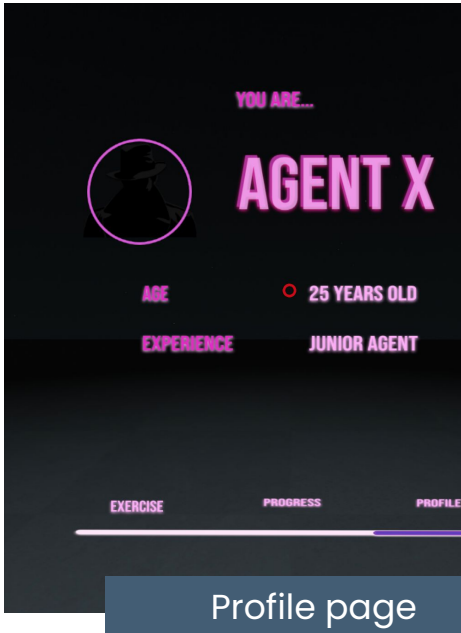


Map setup process

"Wait so I have to **re-do every single step** to fix my mistake?"

- Elena

Lack of Meaningful Content



"I feel like **some of the content that is inside the profile can be integrated in the progress bar.**"

- Jess

"I think the **profile page needs more content** because I expect so much **more than just age and experience.**"

- Giulia

"It could be made **more informative.** (Progress page)"

- Crystal



FINAL VERSION

High-Fidelity Prototype

“Punch to Start”
screen



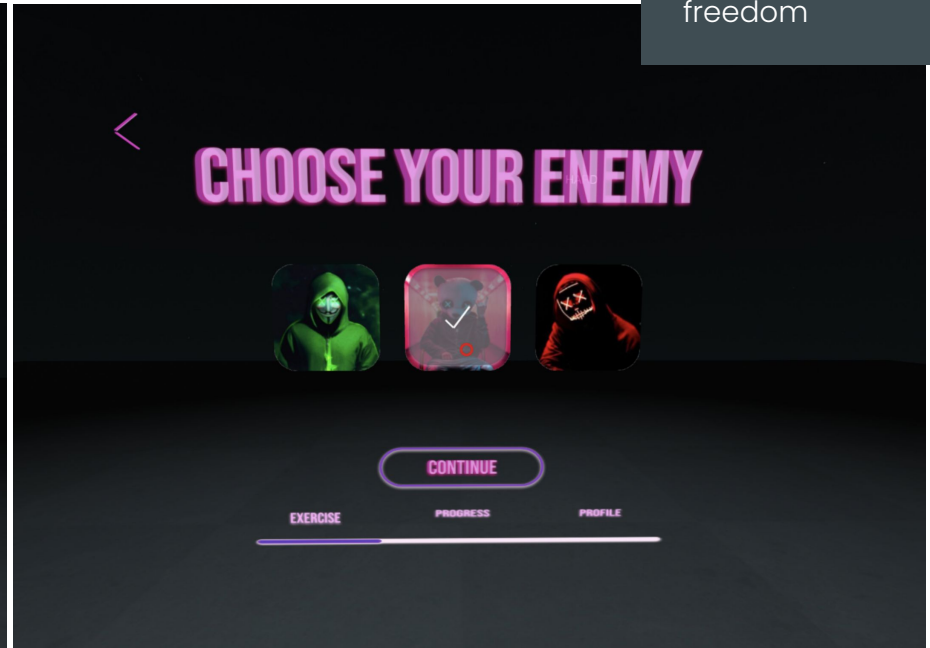
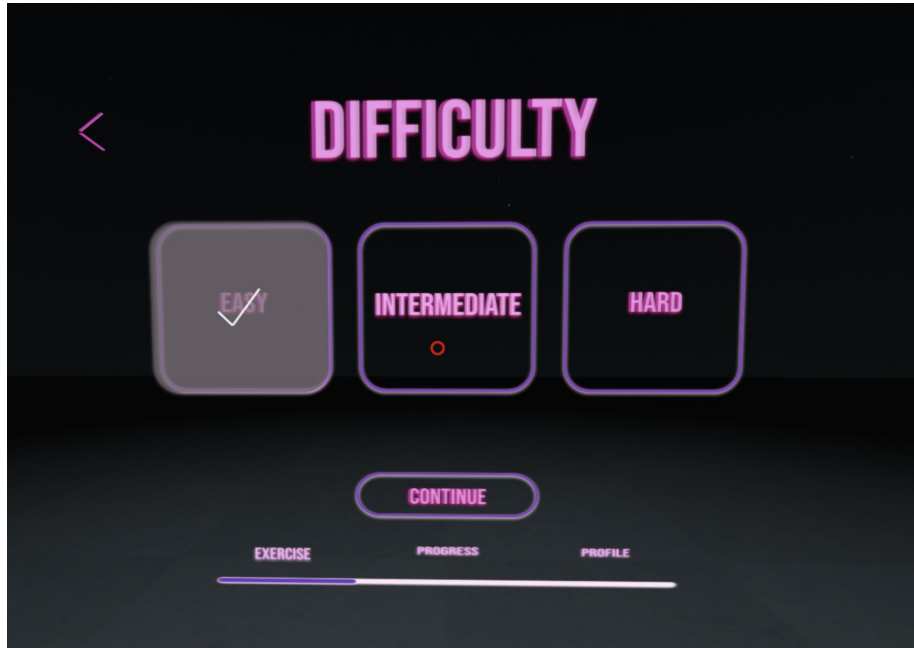
PUNCH TO START

“Punch to Start”
screen when
punched



Back Button Accessibility

user control and freedom





QUICK, DEFEAT THE ENEMIES AND CONTINUE RUNNING!
PUNCH THE TARGETS TO DEFEAT ENEMIES

More **contrast and visibility for instructions**

An alternative idea: bigger and bolded text (already have audio)



80
BPM


5
CAL BURNED




AGENT X, DO A SIDE LUNGE!

A minimise bar for expert users (flexibility and efficiency of use)



GREAT!



COMBO 1X



80
BPM

5
CAL BURNED

MISSION 1 SUCCESS



DEAR AGENT, I AM PROUD OF THE HARD WORK AND EFFORT THAT YOU PUT INTO THIS MISSION. IT IS MY HONOUR TO TELL YOU THAT WE WOULD LIKE TO WORK WITH YOU ON OUR NEXT MISSION AS WELL.

NEW BADGE EARNED



TRUSTWORTHY BADGE

GO TO PROGRESS

“Mission 1 Success” page to make the user feel more rewarding

A badge that could be gained by the user to feel accomplished and proficient in their “mission”.



KEEP UP THE GOOD WORK AGENT! GREAT TO SEE YOU
WORKOUT THOSE MUSCLES

WED 11/11/2020

DAILY

WEEKLY

MONTHLY

MUSCLES YOU'VE WORKED

YESTERDAY



CALORIES BURNED



350

AVG HEART RATE




115

BADGES EARNED



ENEMIES YOU'VE DEFEATED



NEEDS WORK  FIT

EXERCISE

PROGRESS

PROFILE

Health B

Healthy -
text, Unh
pink text

Badge

Remind
their suc

YOU ARE....



AGENT X

AGE

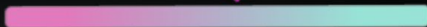
25 YEARS OLD

EXPERIENCE

JUNIOR AGENT

BONE HEALTH

UNHEALTHY



HEALTHY

MUSCLE HEALTH

UNHEALTHY

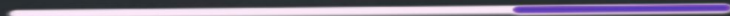


HEALTHY

EXERCISE

PROGRESS

PROFILE



Muscle and bone health bars to remind the user's current health status and help them get to where they want to be.

Thank you 😊

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