



**100% focus, wherever you are**

**William Eng, Boyan Li, Teran Long, Thomas Pham**

# MEET JIM

- Jim is **2nd year college student** at UW
- He **lives with two other people** in the college dorm sized for 2
- Since starting at UW, he's finding it **difficult to balance his social, academic, and work life**
- Constantly **getting distracted**
- Needs **social accountability** to get his work done



# THE BIG PROBLEM

Hours of productivity are lost to everyday  
distractions

# OUR GOAL

100% focus, wherever you are.

# TASKS

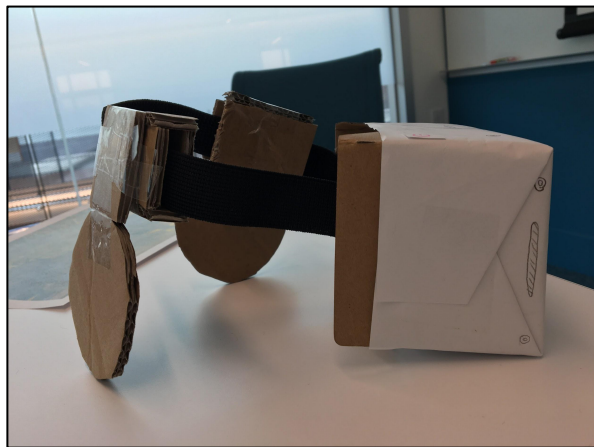
Task 1: Feel motivated to work

Task 2: Remove distractions

INITIAL PAPER  
PROTOTYPE

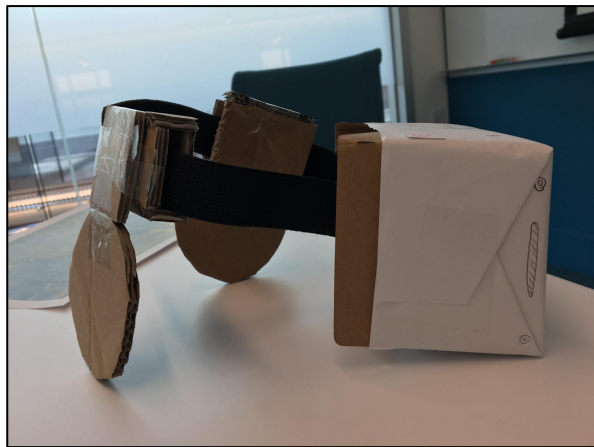
# KEY ELEMENTS OF OUR DESIGN

- VR/MR Headset
- Low-Latency Cameras
- Sensors
- Noise Filtering
- Visual Filtering



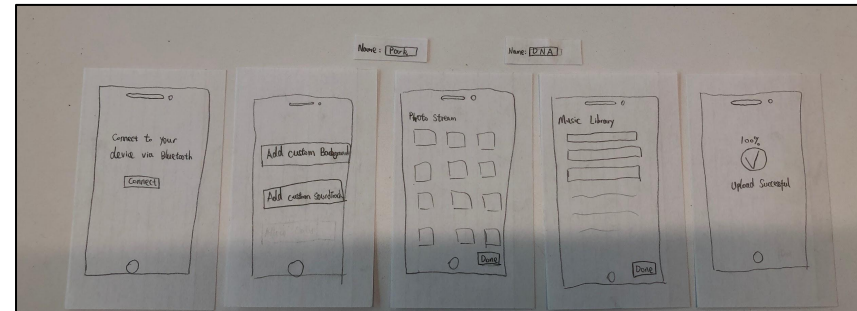
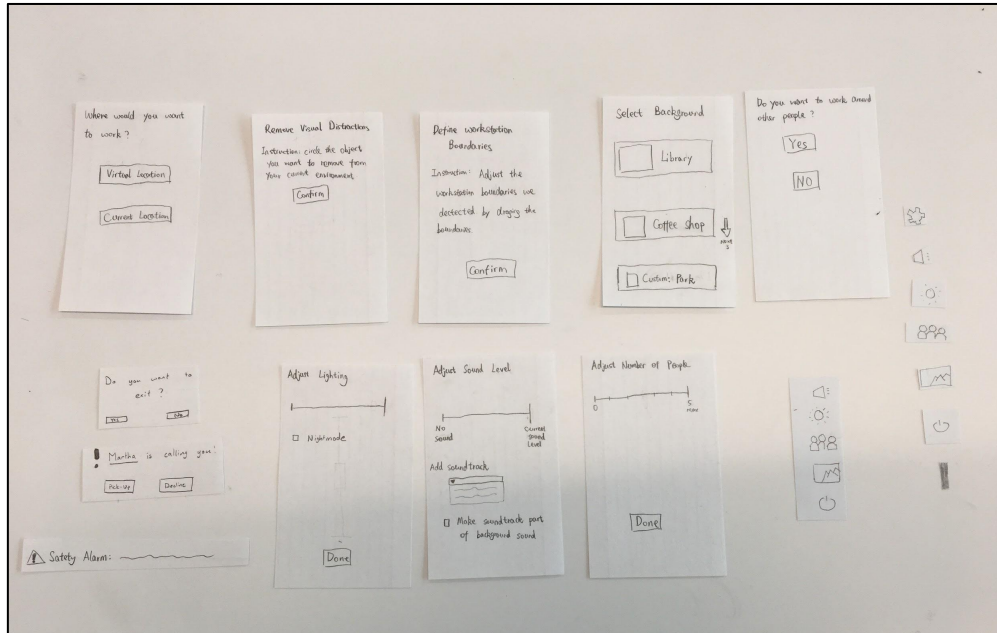
# WHY?

- Portable
- Accessible
  - Non-invasive
  - Works with glasses
- Comfortable
- Visual + audio

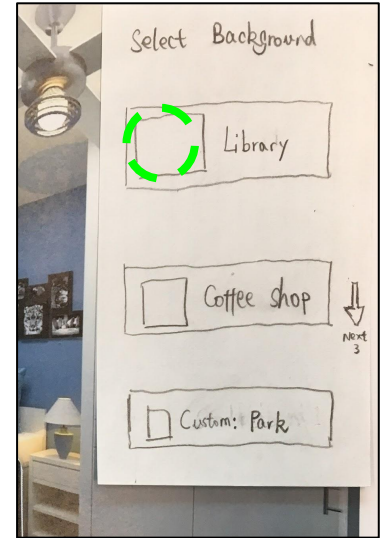
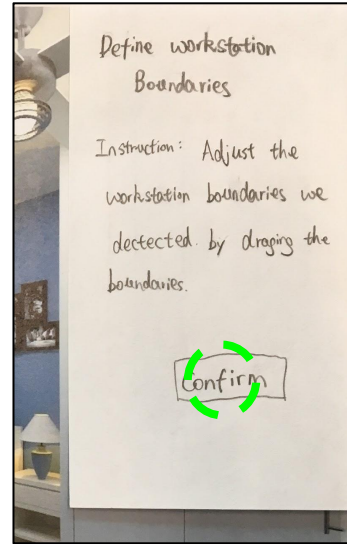
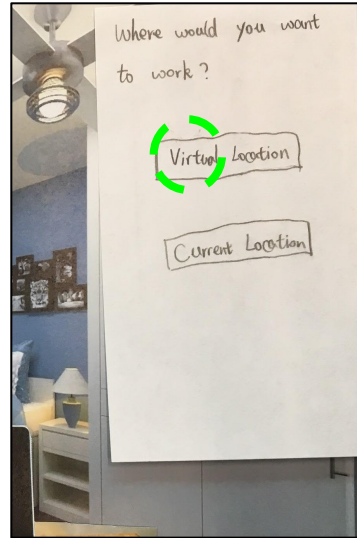




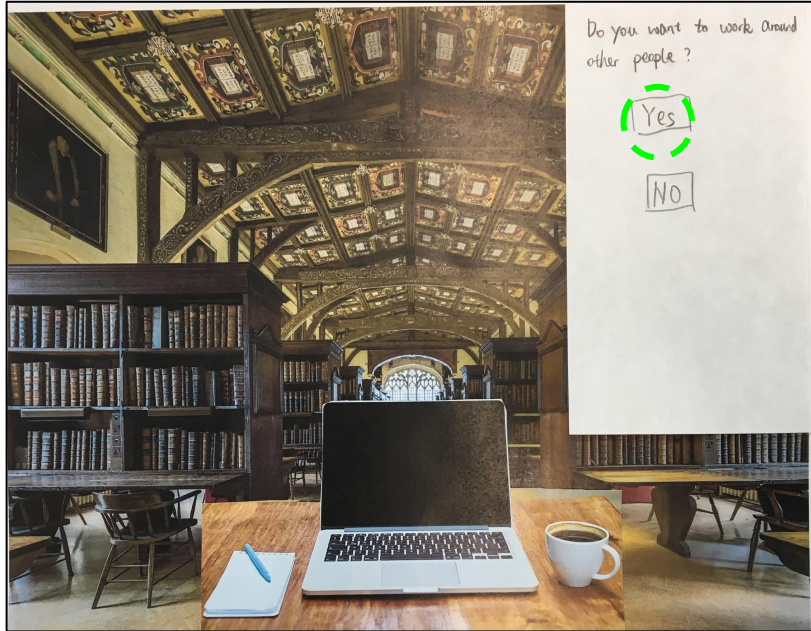
# INITIAL PAPER PROTOTYPE OVERVIEW



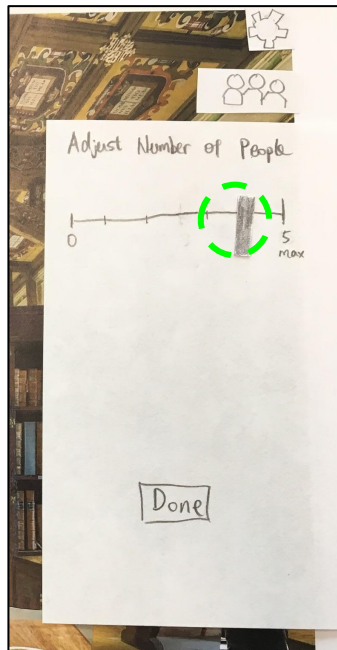
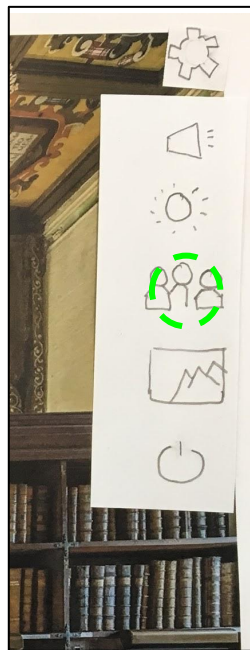
# TASK 1: FEEL MOTIVATED TO WORK



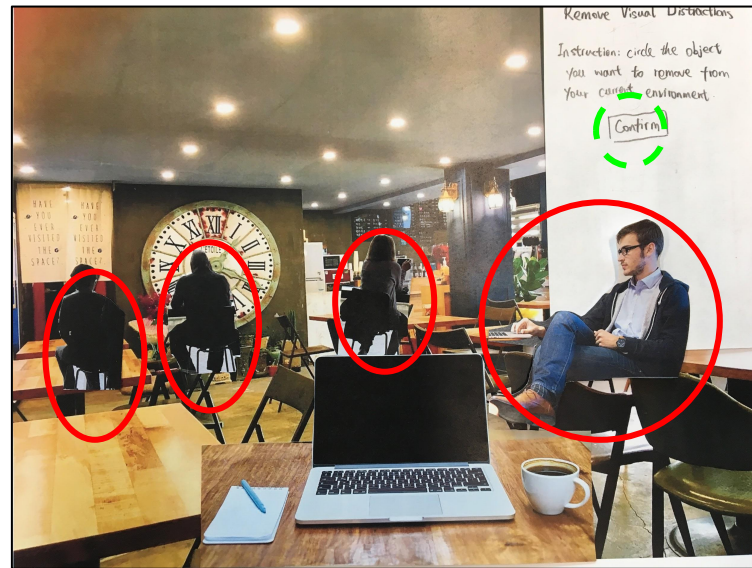
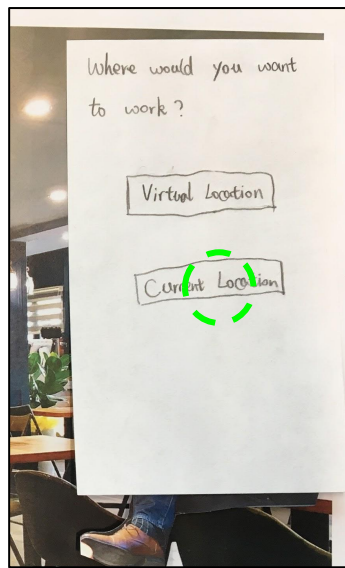
# TASK 1: FEEL MOTIVATED TO WORK



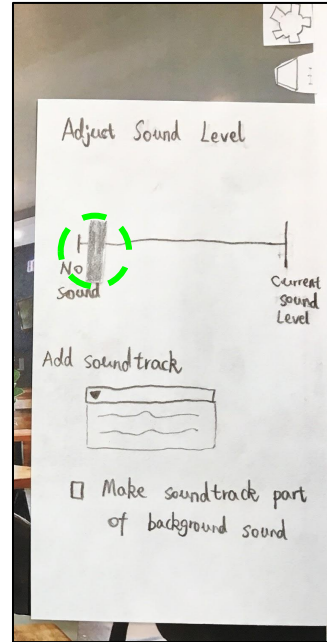
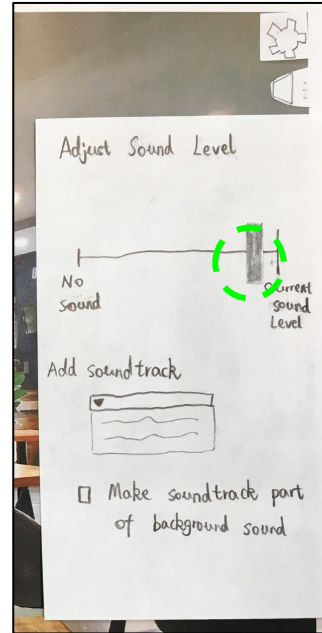
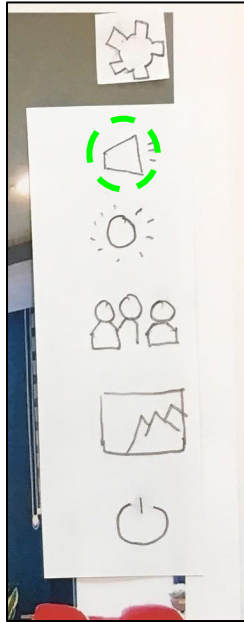
# TASK 1: FEEL MOTIVATED TO WORK



# TASK 2: REMOVE DISTRACTIONS



# TASK 2: REMOVE DISTRACTIONS



# TESTING PROCESS AND RESULTS

# TESTING PROCESS

## Tests:

- 2 Heuristic Evaluations
- 3 Usability Tests
- Usability Test Participants
  - 2 UW undergraduate students
  - 1 UW graduate student

## Scenarios:

1. You would like to feel like you are studying in a library with other people.
2. You would like to feel like you are studying alone in the coffee shop.
3. You would like to change some settings in your virtual environment.
4. You would like to upload a picture, and put yourself in that virtual environment.



WE CONDUCTED TWO  
USABILITY STUDIES...

Then reflected on our  
design

# A SELF-HEURISTIC EVALUATION STORY

## PART-1

We realized our design was getting very complex.

Users in our first two usability studies suggested such great features!

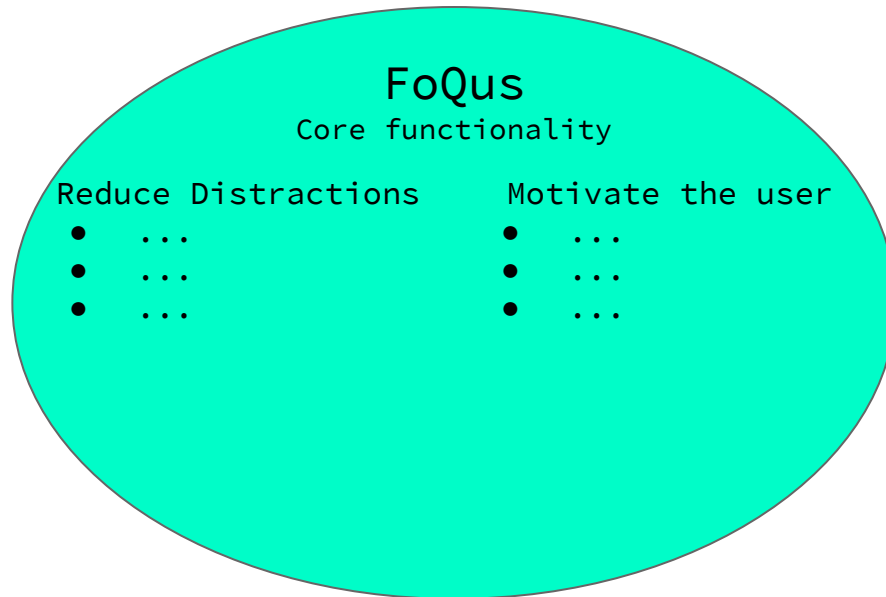
- Night mode
- Upload custom music
- Upload custom background
- In-app push notifications
- etc...

But fundamentally, we want to increase user FoQus...

# A SELF-HEURISTIC EVALUATION STORY

## PART-2

- What does it mean to increase focus?

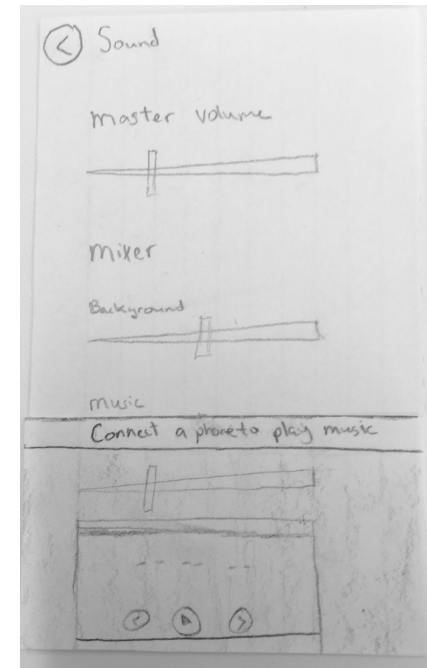
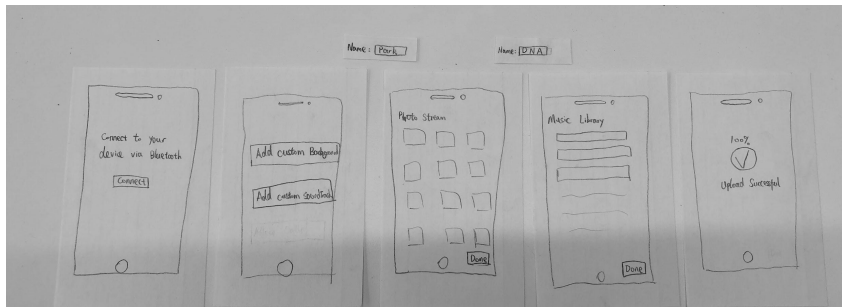


# A SELF-HEURISTIC EVALUATION STORY

## PART-3

### Mobile Companion App

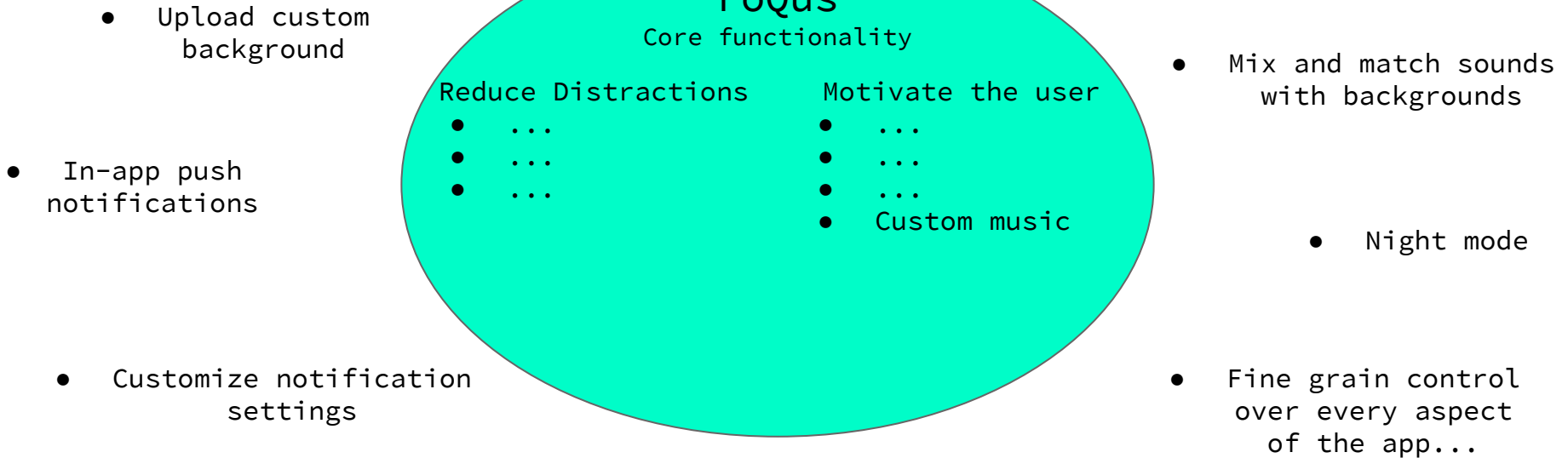
- Custom backgrounds **-> Cut**
  - Too much customizability -> more distractions
  - Too many steps -> slow startup time
- Custom music **-> Redesign**
  - Too many steps -> slow startup time
  - User enjoys music -> Motivates user



# A SELF-HEURISTIC EVALUATION STORY

## PART-3

- What does it mean to increase focus?



# USABILITY TESTING PROCESS REFINEMENTS

- Removed Task 4
  - Removed the mobile companion app
- Asked more questions about user confusions
  - Let user explain confusions
  - Clearer direction to solve issues

# TESTING FINDINGS

- Visibility of system status
- User control and freedom
- Aesthetic and minimalist design
- Help and documentation

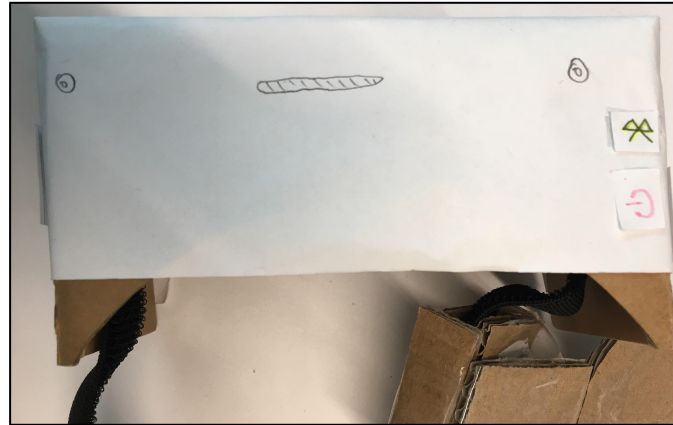
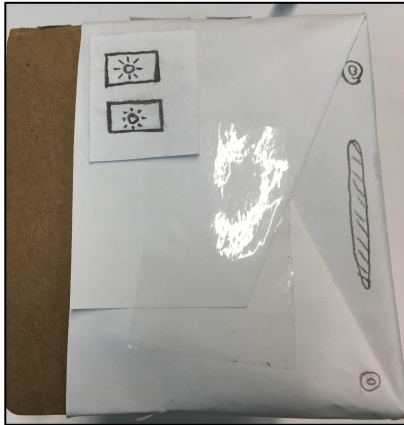
# DESIGN REFINEMENTS

- Visibility of system status
  - Showed workstation selection boundaries on screen.
  - +2 more...
- User control and freedom
  - Back buttons added to each page
  - +1 more...
- Help and documentation
  - Added info buttons to each page for a more details
  - +5 more...
- Aesthetic and Minimalist Design
  - Uploading music flow changed to bluetooth streaming flow
  - +2 more...



FINAL PAPER  
PROTOTYPE

# FINAL PAPER PROTOTYPE OVERVIEW



# FINAL PAPER PROTOTYPE OVERVIEW

**FOCUS**

Start in a Virtual Location →  
Start in your Current Location →

Collect menu → Adjust Sound → Adjust number of background characters → Change Equipment → Return Home

Collect menu → Adjust Sound → Adjust number of background characters → Remove Distractions → Return Home

Are you sure you want to go home and reset all settings?

Do you want to work around other people?

Yes  
No

Remove Visual Distractions

Circle the distractions you would like to remove from your current environment. When your focus and speed remain high then your environment's distraction level is decreasing.

Undo | Redo

Select Background

Library  
Coffee Shop  
Park

Done

Define workstation Boundaries

Instruction: Adjust the workstation boundaries we detected by dragging the boundaries.

Done

Are you still want to see work in your virtual environment?

Done

Done whether or not you would like to see avatars of your peers using this space around you when you work.

Done

Background value refers to the ambient noise in the room and music volume added to the audio coming from your virtual workstation.

You can use these identity or sound the visual value of the audio volume to be.

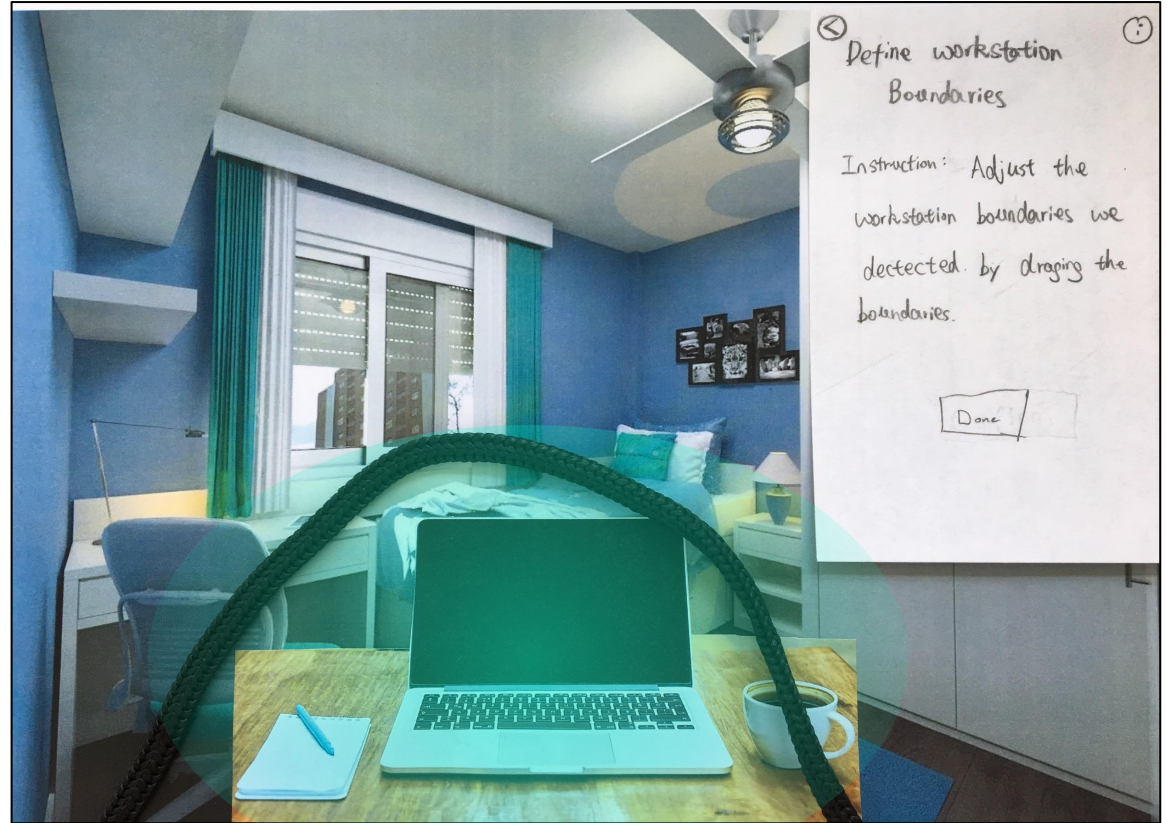
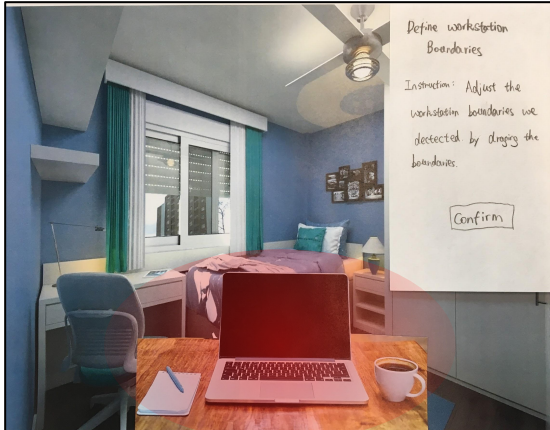
Safety Alarms: Fire Alarm



# IMPROVEMENT 1:

Visibility of system status

Showed workstation selection boundaries on screen.



# IMPROVEMENT 2:

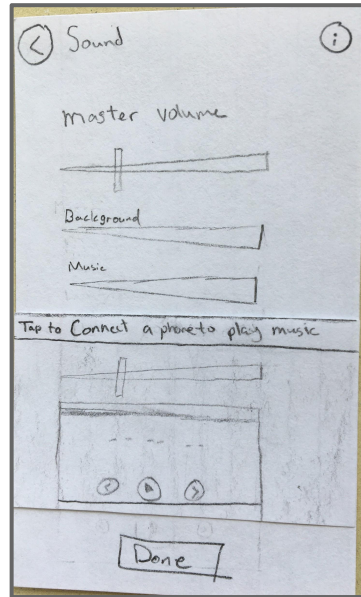
Aesthetic and Minimalist Design

Uploading music flow changed to bluetooth streaming flow

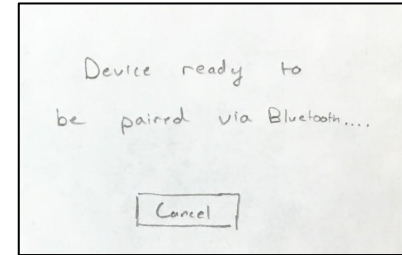
+ Mobile Companion App



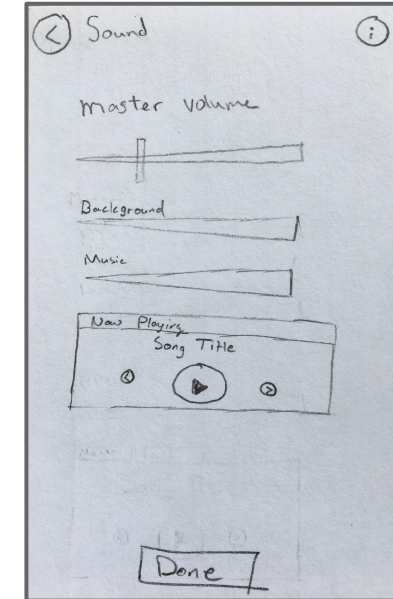
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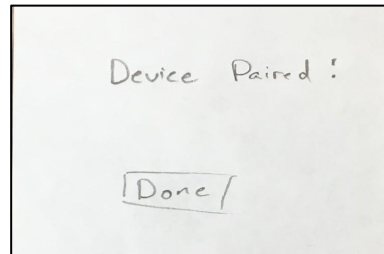
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4



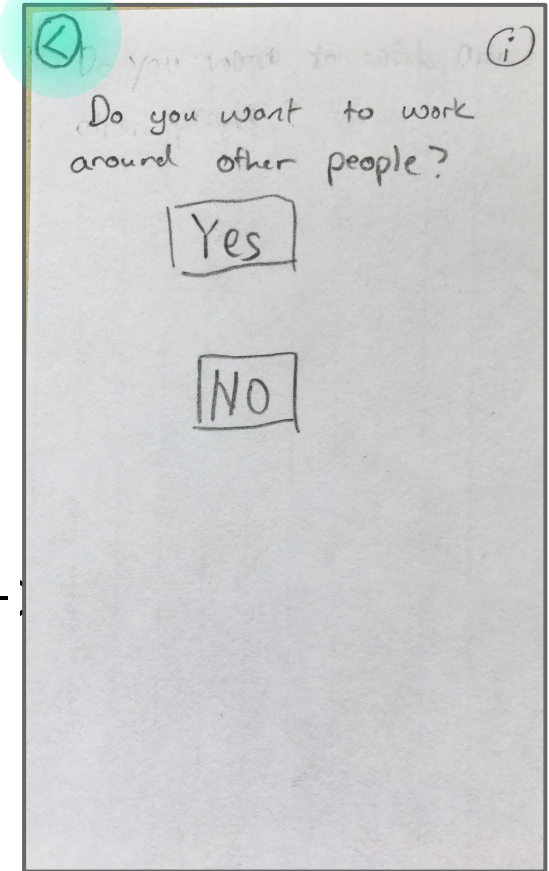
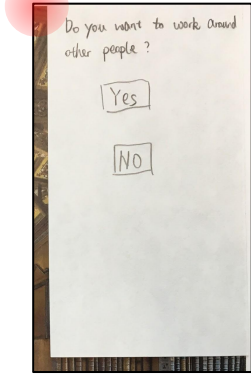
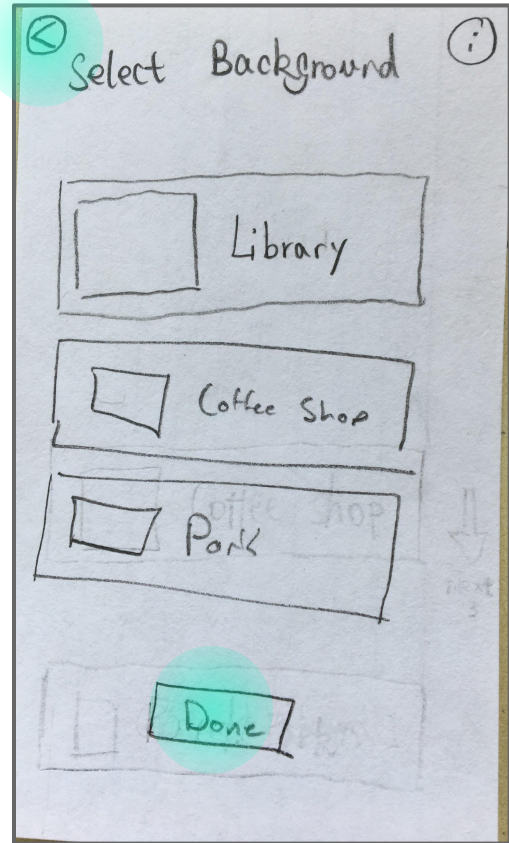
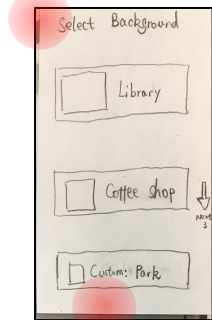
3



User control and freedom

Back buttons added to each page  
Confirmation buttons added

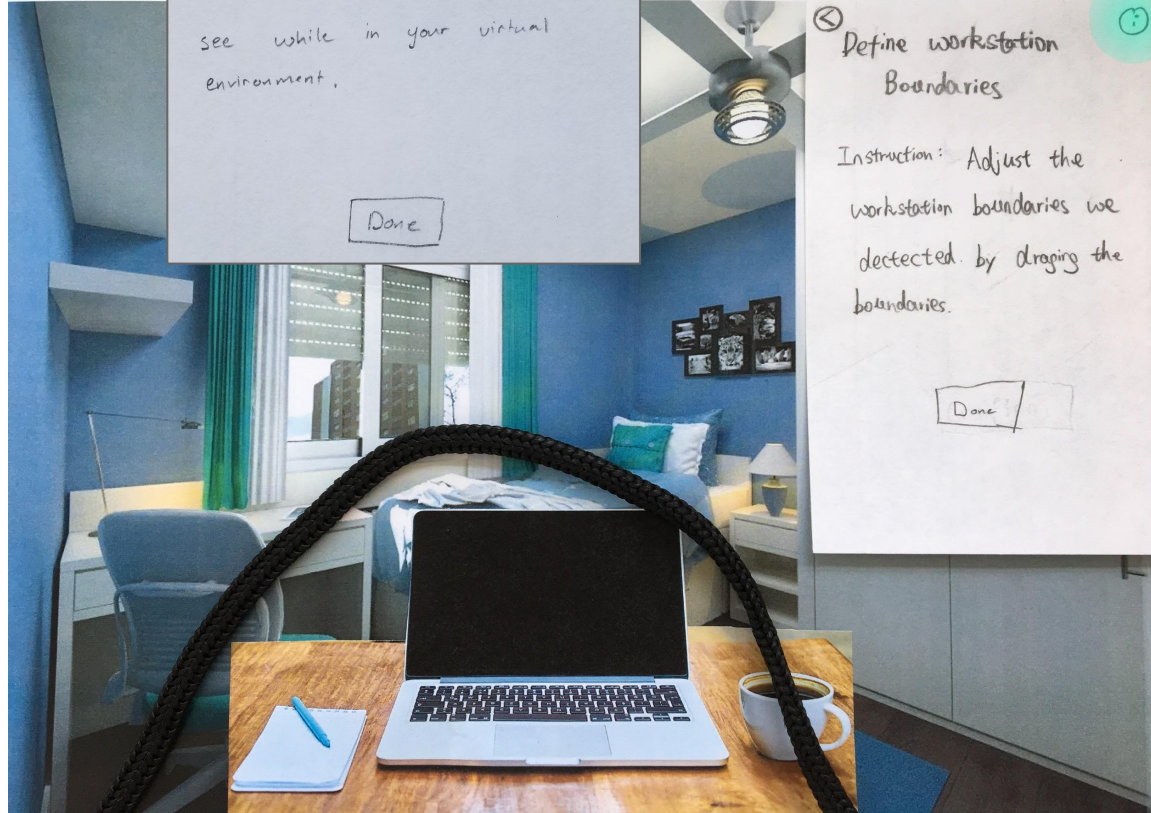
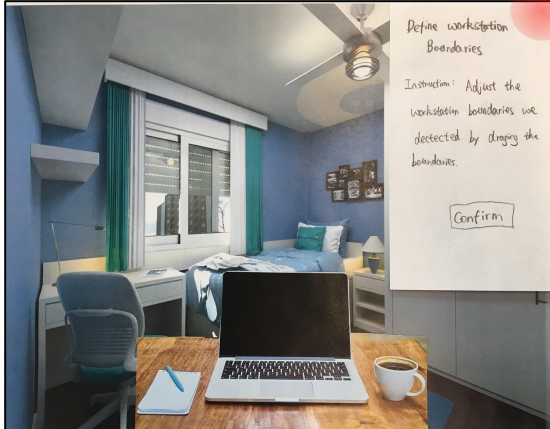
# IMPROVEMENT 3:



# IMPROVEMENT 4:

Help and documentation

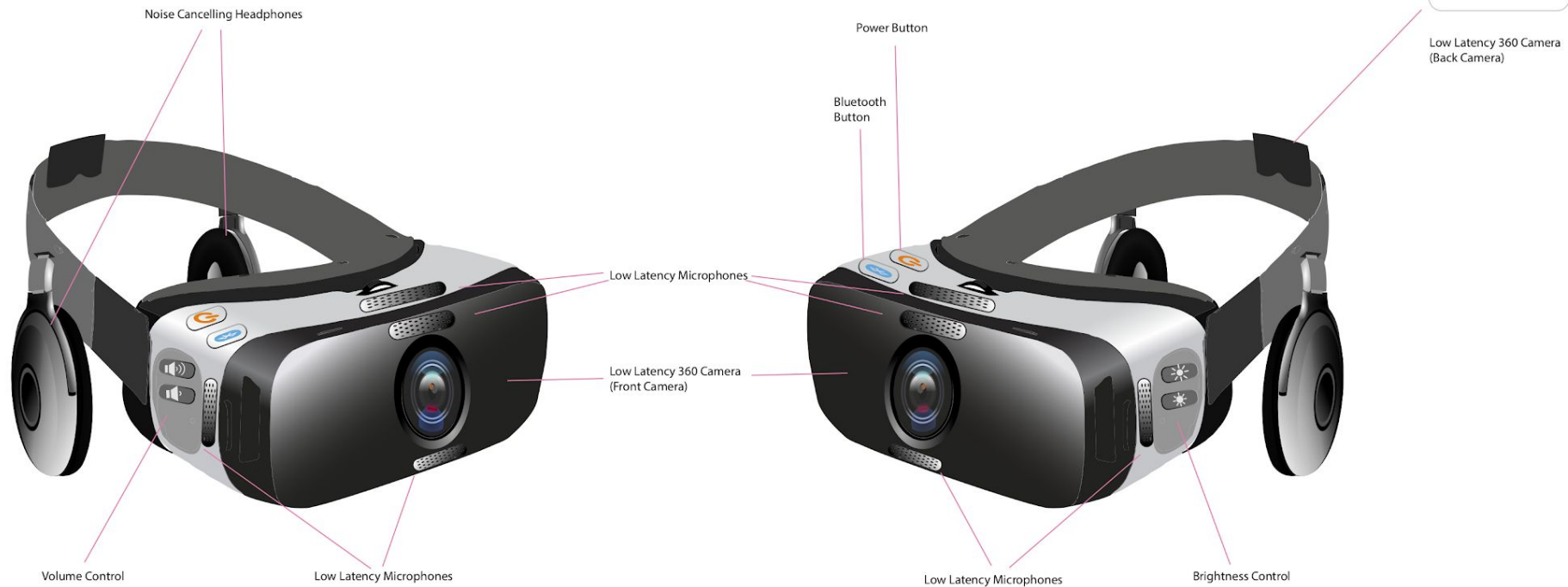
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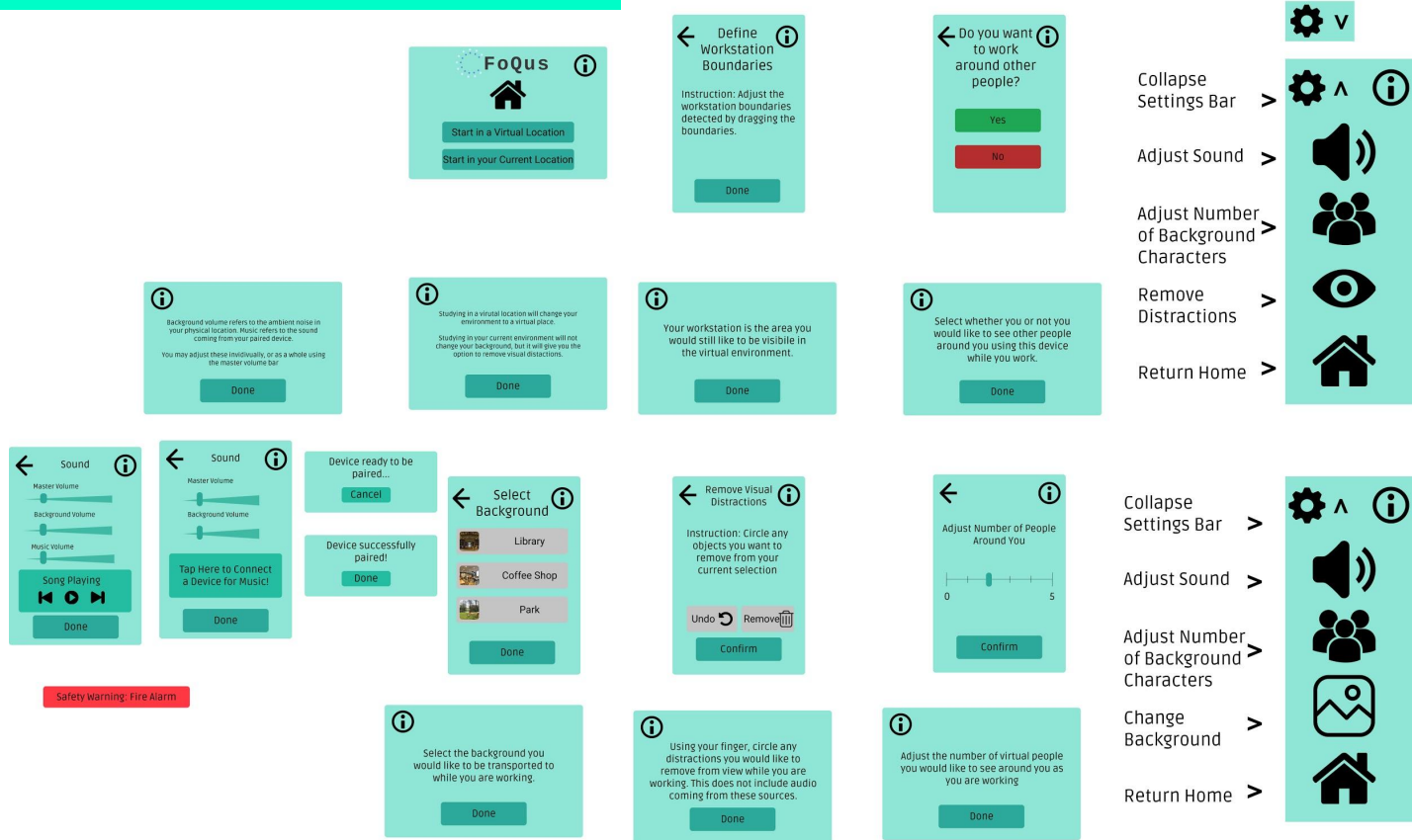
DIGITAL MOCKUP



# DIGITAL MOCKUP OVERVIEW



# DIGITAL MOCKUP OVERVIEW



# TASK 1: FEEL MOTIVATED TO WORK





← Define Workstation Boundaries ⓘ

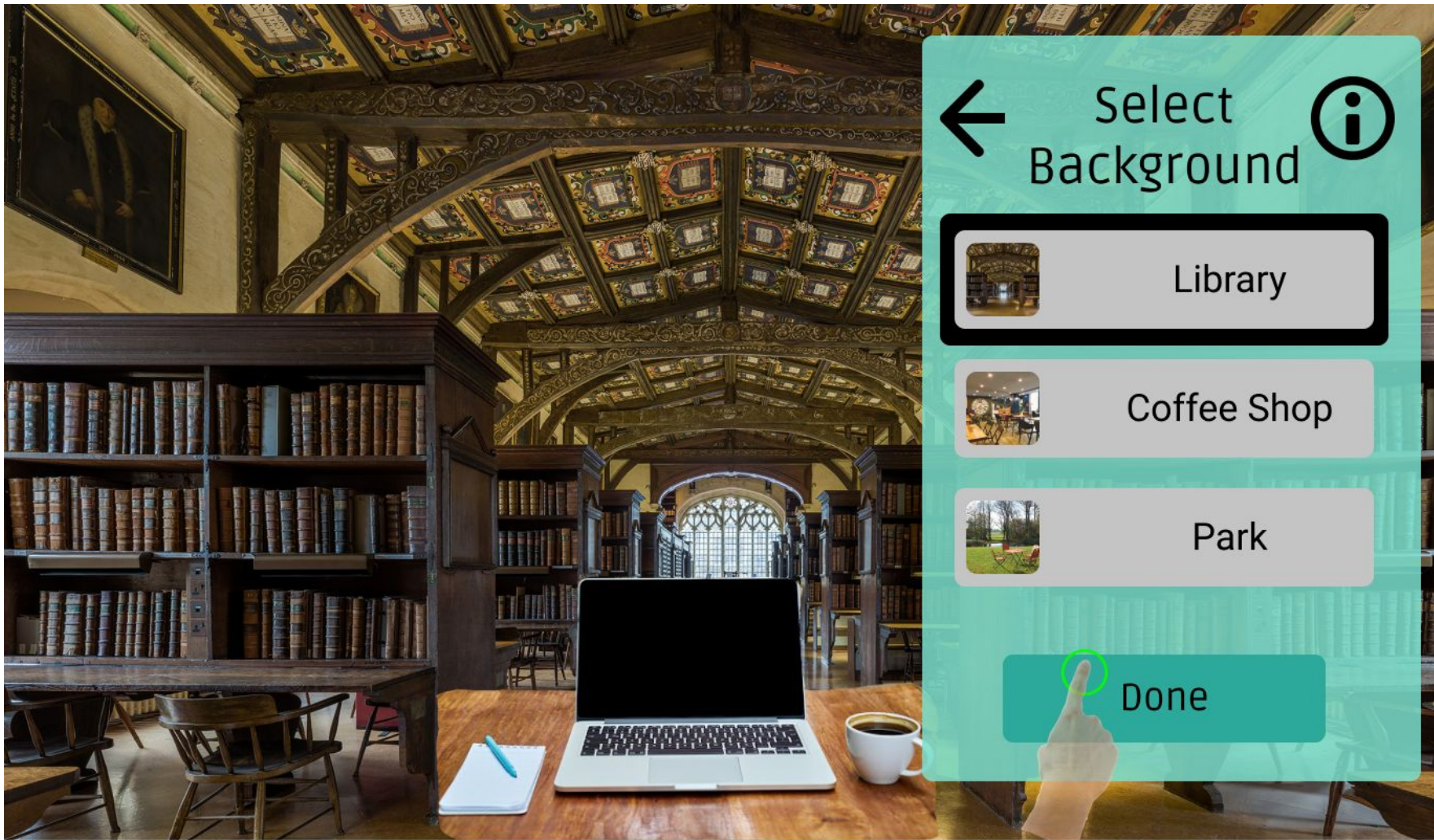
Instruction: Adjust the workstation boundaries detected by dragging the boundaries.

Done

← Select Background ⓘ

- Library
- Coffee Shop
- Park

Done



Select  
Background



Library



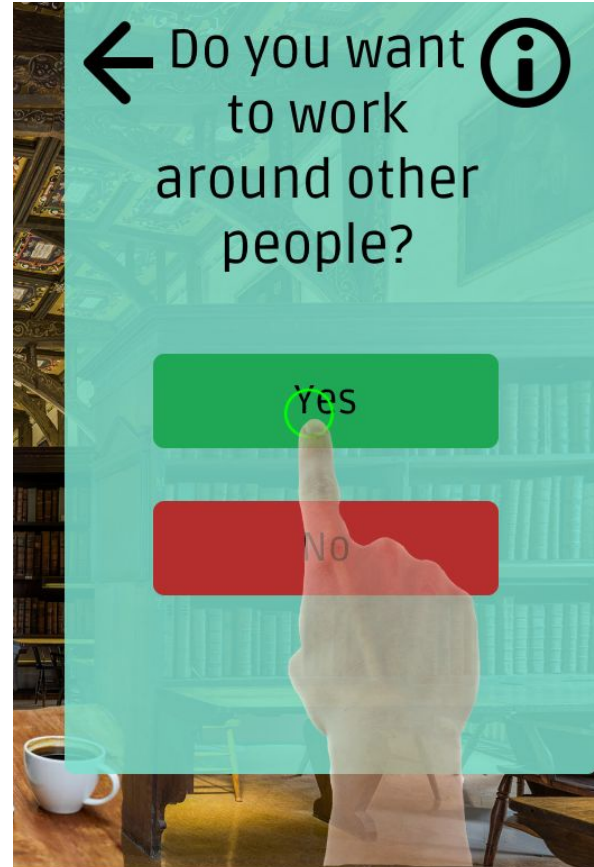
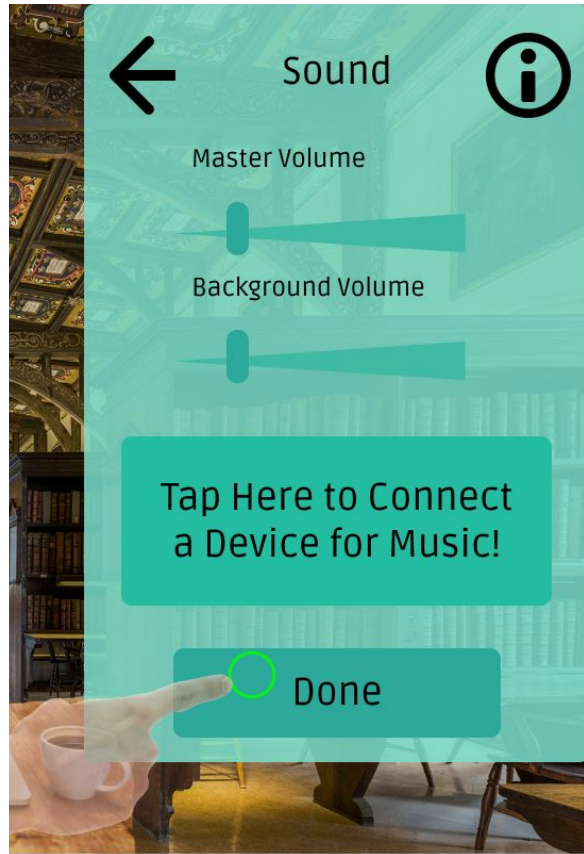
Coffee Shop



Park



Done

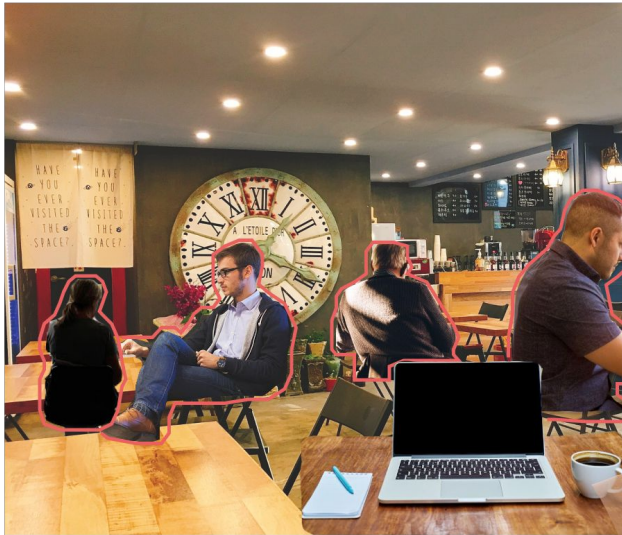




# TASK 2: REMOVE DISTRACTIONS







← Remove Visual Distractions ⓘ

Instruction: Circle any objects you want to remove from your current selection

Undo ↶

Remove 🗑️

Done



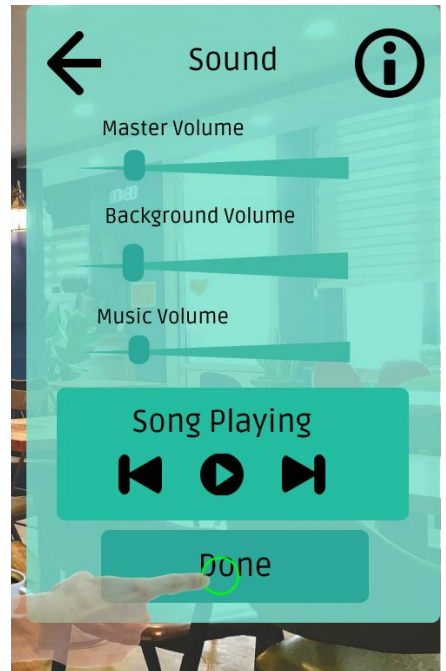
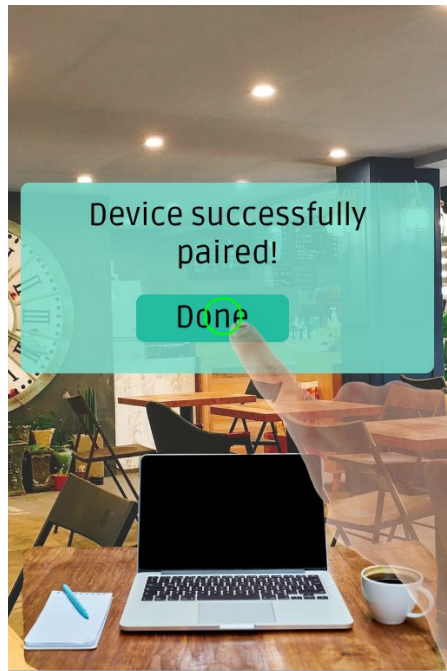
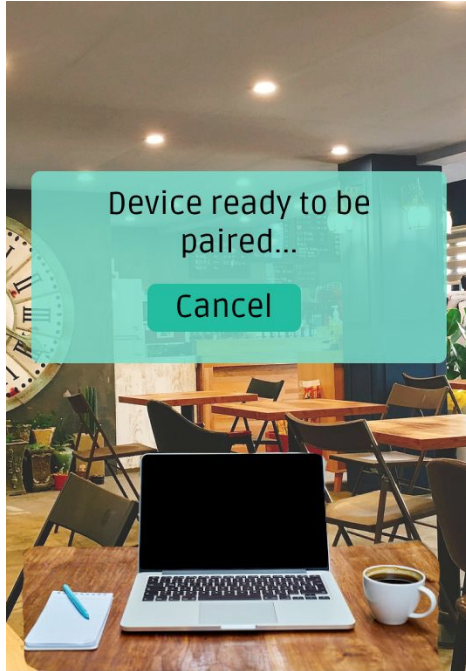
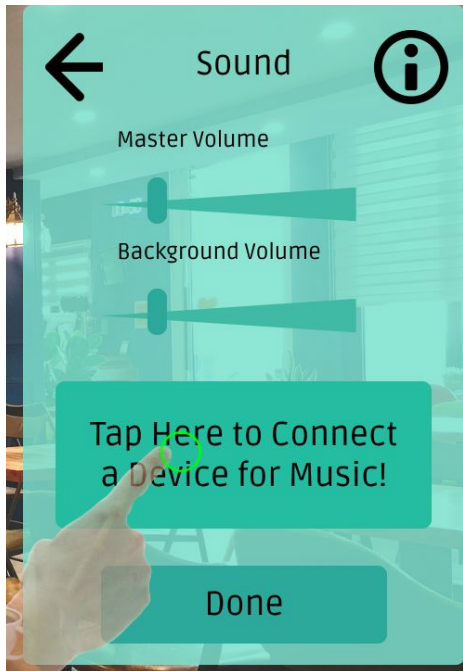
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Instruction: Circle any objects you want to remove from your current selection

Undo ↶

Remove 🗑️

Done





SUMMARY

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- Always keep your design problem in mind
- Clarity and simplicity are key for our users
- Prioritize the most important features to your tasks

# FUTURE WORK

- Form factor options
- More accessible
- More customization in a less distracting way

QUESTIONS?