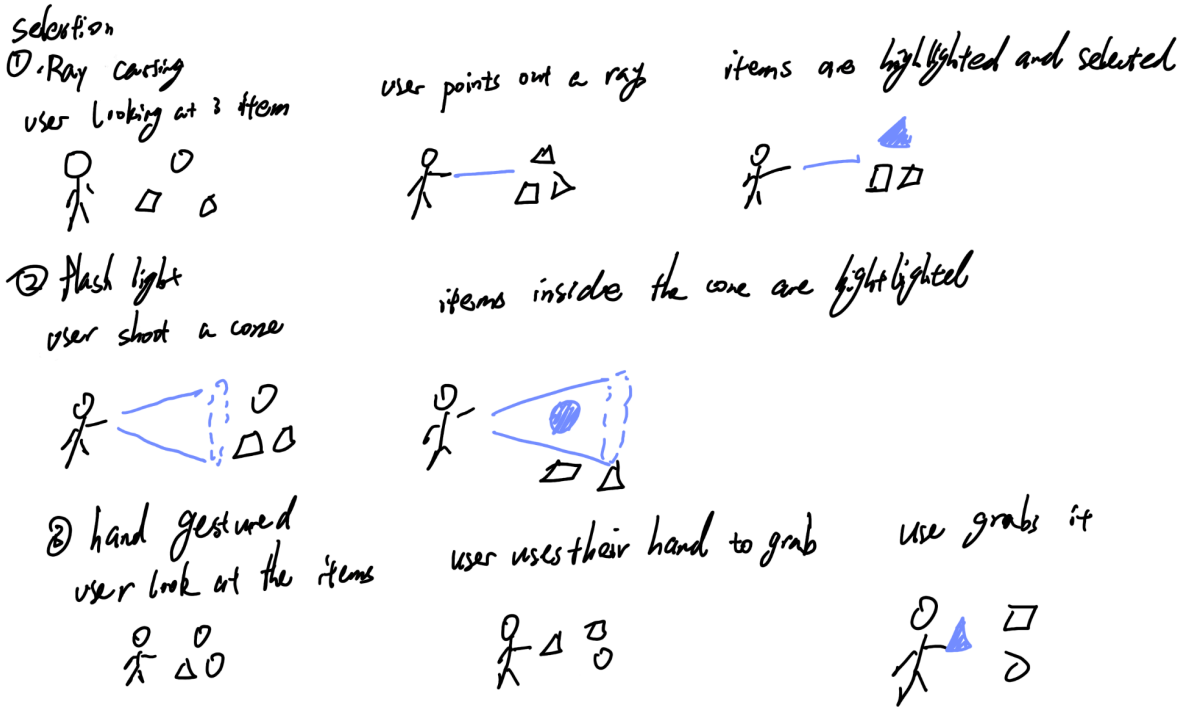
https://github.com/kaijia2022/CSE165_Project1

Bran Zhang
Luke Wang

Design Exploration - Interaction Storyboards

Add images of your design explorations below.

Each design exploration needs to be in the form of a storyboard that depicts the full interaction
(you can think of it as a before state, an action or set of actions, and an after state).
An example of a simple interaction storyboard is here. You can sketch on paper or use tools like Milanote.



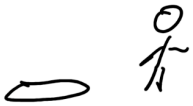
Travel

① teleport

user stands in the middle of the room

user points using ray

user goes to the pointed location

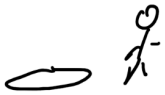


② controller stick

user starts in the middle of the room

push the controller stick forward

user moves forward



③ coordinate

user starts in the middle of the room

user input location in the menu

user jumps to that location

Heuristic Evaluation Guide

Perform a heuristic evaluation of the system you implemented.

***Violation**: How does your system violate the heuristic? Be specific.*
***Severity (high, medium, low)**: How much does this violation impact the user experience?*
***Recommendation**: How can you fix this issue? If any of your design choices work better, mention it.*

Heuristic	Violation	Severity	Recommendation
1 **Visibility** *of* **System Status** **Designs should *keep users informed* about what is going on, through appropriate, timely feedback.**  Interactive mall maps have to show people where they currently are, to help them understand where to go next.	Slight violation (could not figure out UI, so no text prompt)	low	Figure out how to interact with UI with oculus, and create a screenspace UI that keeps the user informed of the current system status
2 **Match between System and the Real World** **The design should speak the users' language. Use words, phrases, and concepts *familiar to the user,* rather than internal jargon.**  Users can quickly understand which stovetop control maps to each heating element.	No violation, all straight forward		
3 **User Control** *and* **Freedom** **Users often perform actions by mistake. They *need a clearly marked "emergency exit"* to leave the unwanted action.**  Just like physical spaces, digital spaces need quick "emergency" exits too.	No emergency exit, although there is really not a lot of room for mistakes	low	There is a reset button for the different editing mode, once UI is configured, we can explain with text how this works

4 Consistency *and* Standards **Users should not have to wonder whether different words, situations, or actions mean the same thing. *Follow platform conventions.***  Check-in counters are usually located at the front of hotels, which meets expectations.	There is no Text prompt, so not applicable		
5 Error Prevention **Good error messages are important, but the best designs carefully *prevent problems* from occurring in the first place.**  Guard rails on curvy mountain roads prevent drivers from falling off cliffs.	There are no error message	medium	Figure out UI and display error message, or simply assign a world object to achieve this functionality
6 Recognition Rather Than Recall ***Minimize the user's memory load* by making elements, actions, and options visible. Avoid making users remember information.**  People are likely to correctly answer "Is Lisbon the capital of Portugal?".	There is a minimal amount of interactive elements, so the user do not to remember much information. Only thing is perhaps which button achieves which transformation on which axis	low	Again, if we can figure out how to add UI and text prompt, things will go straight forward
7 Flexibility *and* Efficiency of Use **Shortcuts — hidden from novice users — may *speed up the interaction* for the expert user.**  Regular routes are listed on maps, but locals with more knowledge of the area can take shortcuts.	No short cuts available	medium	Add some shortcut, but in our case, there is really no need because there is not much feature

8 Aesthetic *and* Minimalist Design **Interfaces should not contain information which is irrelevant. Every extra unit of information in an interface *competes* with the relevant units of information.**  A minimalist three-legged stool is still a place to sit.	Not violated		
9 Recognize, Diagnose, *and* Recover from Errors **Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.**  Wrong-way signs on the road remind drivers that they are heading in the wrong direction.	Not applicable		
10 Help *and* Documentation **It's best if the design *doesn't need* any additional explanation. However, it may be necessary to provide documentation to help users complete their tasks.**  Information kiosks at airports are easily recognizable and solve customers' problems in context and immediately.	Not violated, there is documentation that explains each feature and how they are used		