Final Project & Presentation: *(100 pts):*

- *Topic Brainstorming 5,*
- *Topic Declaration & Contractual Grading 10,*
- *Storyboarding Input/Interaction Design 15,*
- *Prototype 20,*
- *Final Implementation of (Input, Interaction, & Immersive Output) 40,*
- *Final Presentation 10.*

Final Project Showcase & Demos: Mon. May 2, 1:30 p.m.– 4:00pm, *(Final Exam Time Slot)*

Topic Brainstorming: 4/14

- **erasing on a trackable marker -> reveals a picture from pixelation/fuzziness to clarity**
    - erasing -> game to guess the celebrity, erasing will slowly un-pixelate the image (bring into HD). The more you erase the less points you win
        - a bunch of cubes, several 2d planes, map out and texture on cubes.
    - **erasing -> flashlight in a game to uncover different animals or monsters hiding in the dark. whatever you reveal will deal damage or heal you until you find the treasure**
        - **a spotlight attached to an object being tracked. Consider : light changing, object morphs or art splash**
- Waving hands or stroking fabric? Petting a virtual pet (blender, import files into unity :O)
- Crochet a marker to be tracked on a crochet item (decorative or accessory), when scanned it gives information on a person's health history or dietary restrictions or needs
- Chopsticks - picking flowers or gardening simulation
- One trackable marker, create a virtual slider that allows the user to switch between and view different art pieces
- Trackable squares flick or push off a table - simulate bowling
- Waving hand to fold a virtual piece of paper -> origami model (maybe a tracker added to hand)

Topic Declaration & Contractual Grading: 4/19

With a mutual agreement between you and the instructor, you will finalize a project topic. As a result you should come up with several required milestones and some "reach goals" that will be agreed upon. These milestones achieved are what you will be graded on in your final project.

Finalized Project Topic: Portrayal of memory loss via trackable erasers

Milestone 1: ✅Create a prop list. Download free Blender/Unity assets for these props, import into Unity and arrange them.

Milestone 2: ✅Create two trackers to place on 2 erasers. Attach spotlight and eyeglass objects to trackable objects in Unity.

Milestone 3: Test collision of trackers with props in Unity (use filters?)

Milestone 4: ✅Make text appear on screen when flashlight object collides with a prop

Milestone 5: ✅Make garbled text appear on screen when eyeglass object collides with a prop

Reach Goals:

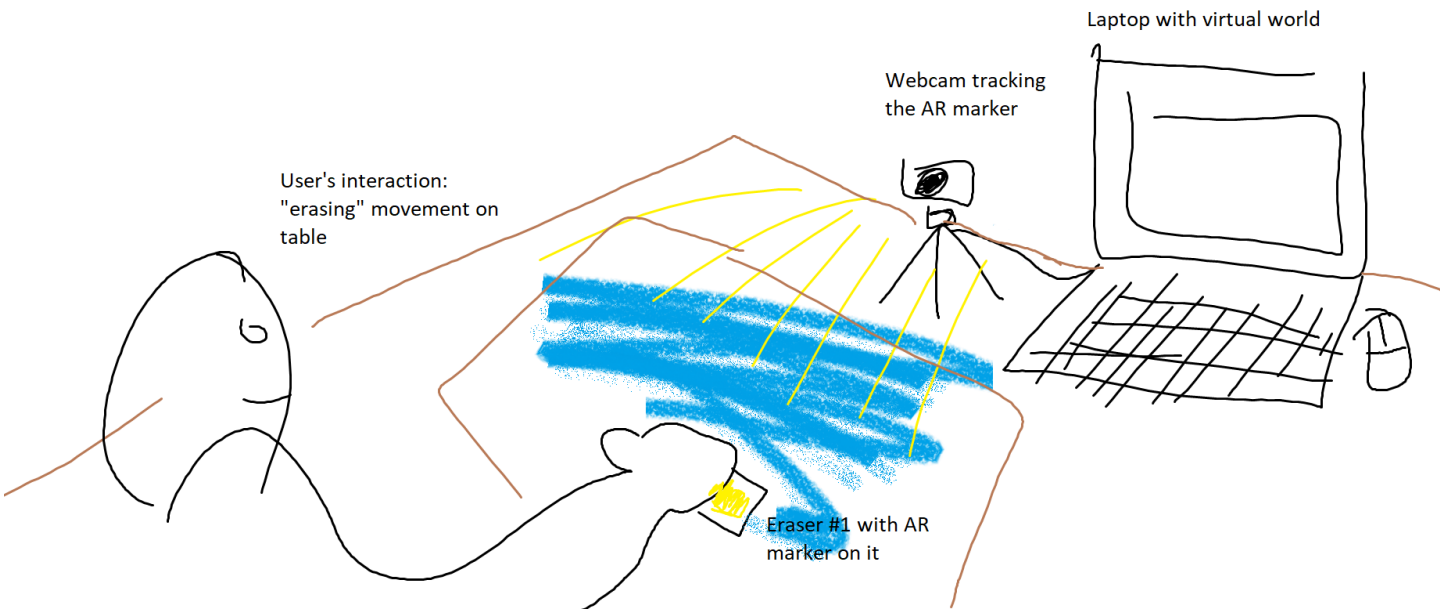
- In addition to garbled text appearing, manipulate objects:
    - Change size/rotation. Simplify objects to rectangle, or sphere, swap objects
- Create, print out, and laminate a map of objects with trackers on them as physical components
    - Someone has something to physically erase on a table or whiteboard rather than just looking at computer screen
    - Ink Shop or a Print Shop in the Stadium for laminate

Storyboarding Input/Interaction Design: 4/21

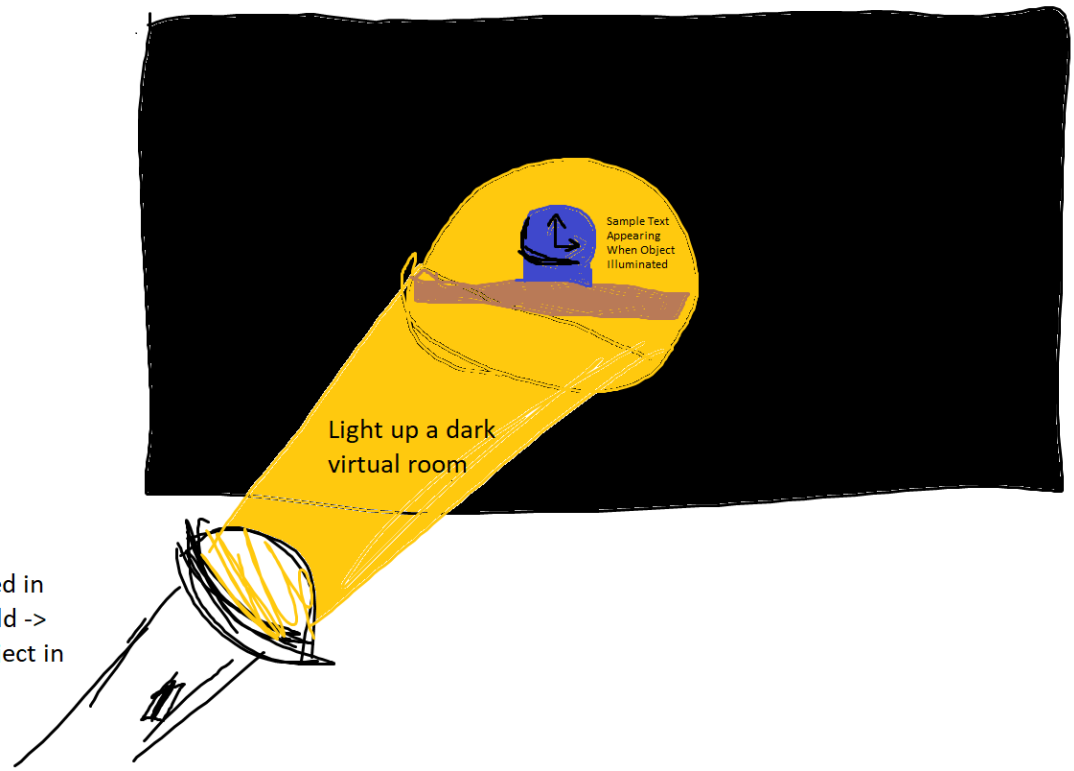
Illustrate the interaction and how it will work. Designs will show how users will interact or perform a task. This will include notes and annotations on input devices used, how interaction will be conducted, and what will happen when users perform these actions.

- First eraser performs erasing -> flashlight in a game to uncover different objects hiding in the dark. Reveal a story about a person around the objects you uncover (text appears)
    - spotlight attached to an object being tracked
    - Track collision of light to object
        - Text appears in front of object
        - Text disappears (hidden) when light stops collision
    - Light gets rid of the darkness

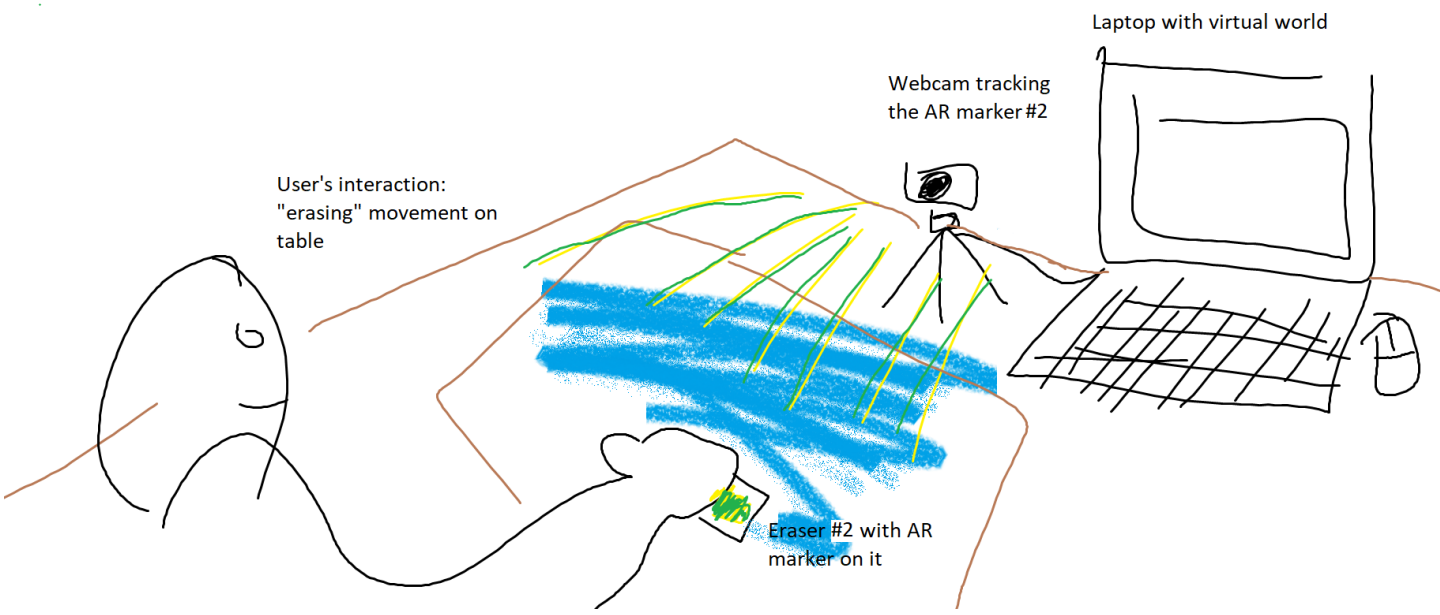
- Second eraser performs erasing -> eye-glass in game to gradually change the objects (warp shape?). Text becomes juggled up and illegible.
    - Eyeglass object attached to an object being tracked
    - Track the collision of eyeglass to object
        - Hide the normal object and make warped object appear
        - Hide the normal text and make garbled text appears



Virtual World (Tracking AR Marker #1)

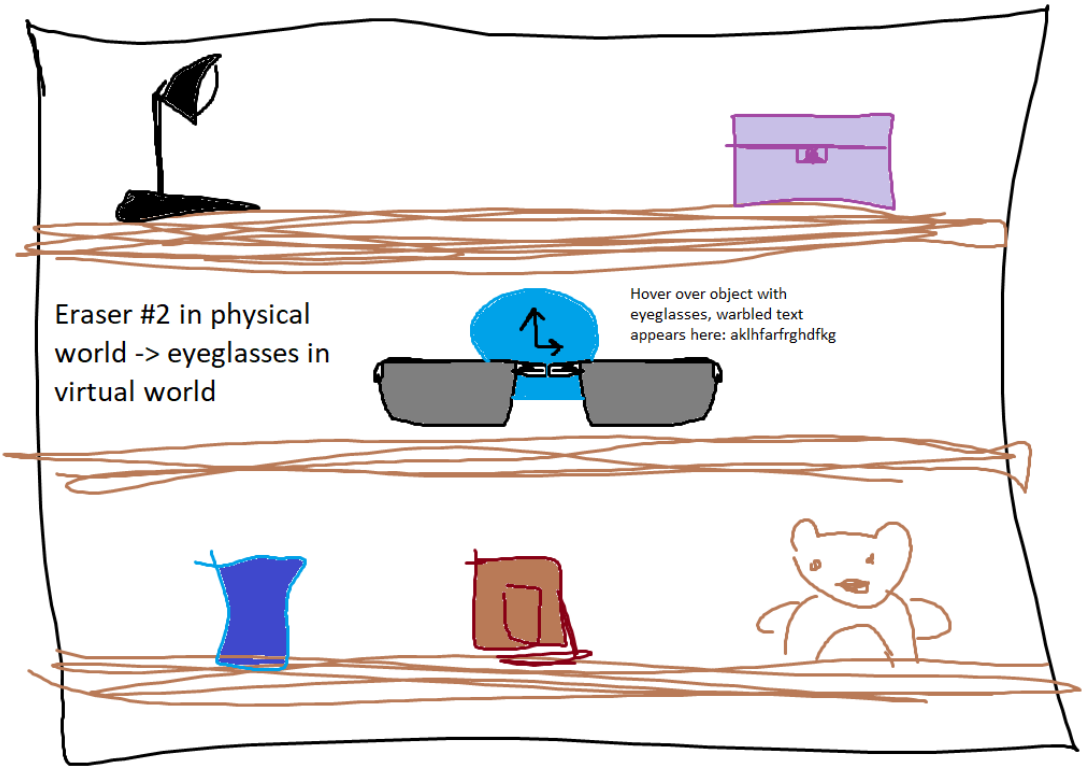


Eraser tracked in physical world -> flashlight object in virtual world



Virtual World (Tracking AR Marker #2)

Objects in room already visible b/c all are illuminated from flashlight with Eraser # 1



Prototype: 4/26

Your prototype may be a “wizard of oz” demonstration, simulated parts, or partial implementation of your interaction/interface. You may use any materials or equipment for your prototype. Your prototype should give a good sense or feel for your interaction.

- Prototype demonstrated in class, 4/26. Instructions on running prototype on HowToRun.txt file.
- Mapped text visibility to left mouse button click and space bar press.

Final Implementation of (Input, Interaction, & Immersive Output): 5/2

You must submit any code, project files, materials, etc. and demo your project on May 2 during the final exam slot.

Final Presentation: 5/2

Your presentation should be about 5-10minutes- you will discuss your aims/objectives of your project, reasoning behind the project, design, and your implementation. Your presentation should include slides and could include some video of your working project. A demo should be prepared for users to try out during the demo time. During the final exam slot, each student will give their presentation and then we will have “demo time” where we will do a round robin of trying out each demo more informally.