

CPSC 599/601

Mixed Reality Prototyping

Slides by
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Today's Agenda

- Users
- Tasks
- 2D sketches
- “3D” sketches

Activities!

- Fun
- Get in groups
- Tip: use your project topics



About Prototyping.



Why prototype?

- The best way to come up with **good** ideas is to come up with **lots** of ideas
- A **low-cost** way to test many different design ideas
 - If it's not usable, it's not useful
- Get **feedback** from your clients early on

What are some difficulties you expect to encounter while prototyping your projects?

Discussion

Users.



User descriptions

Good example

- Kids ages 6 – 10 who are familiar with computers but not with programming. They want to learn basic programming concepts like conditionals and loops.

Bad example

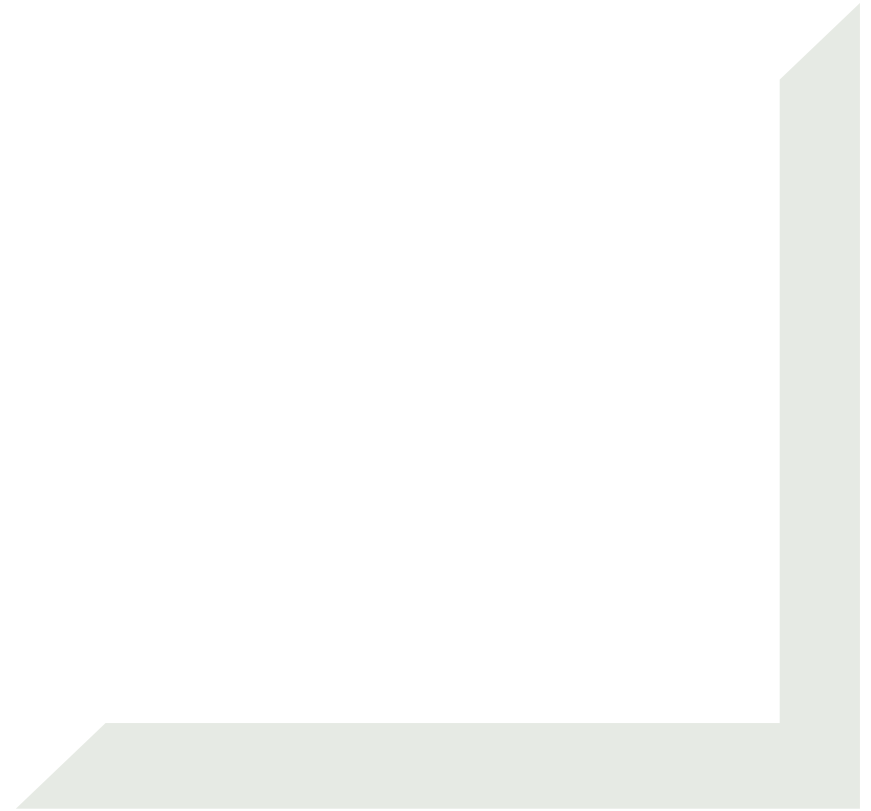
- Kids learning to code.

Users

- Who are your users?
- What are their goals?
- What skills and knowledge do they have?

Make a list of 3-5 user types. Create a detailed description for one **important** user type which you will design for today. (10 minutes)

Tasks.



Task descriptions

Good example

- A 7-year-old kid with no programming experience wants to add a feature to the simple game they are programming. If the player has at least 10 points by the end, they win, otherwise they lose. They create two different paths in the code which will be chosen based on how many points the player has.

Bad example

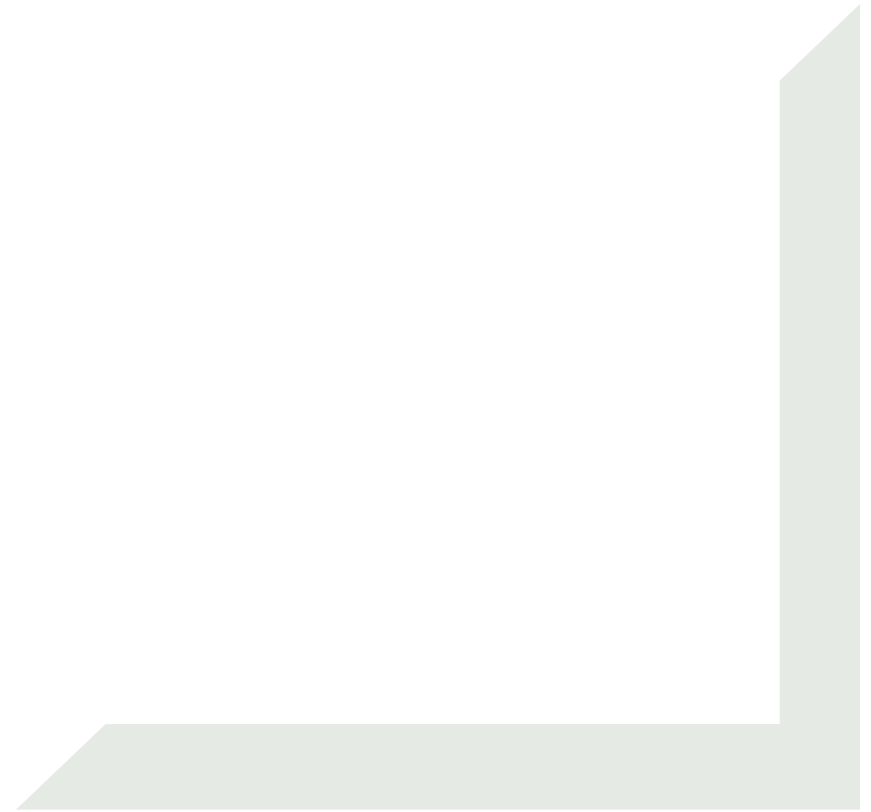
- Create an if-statement

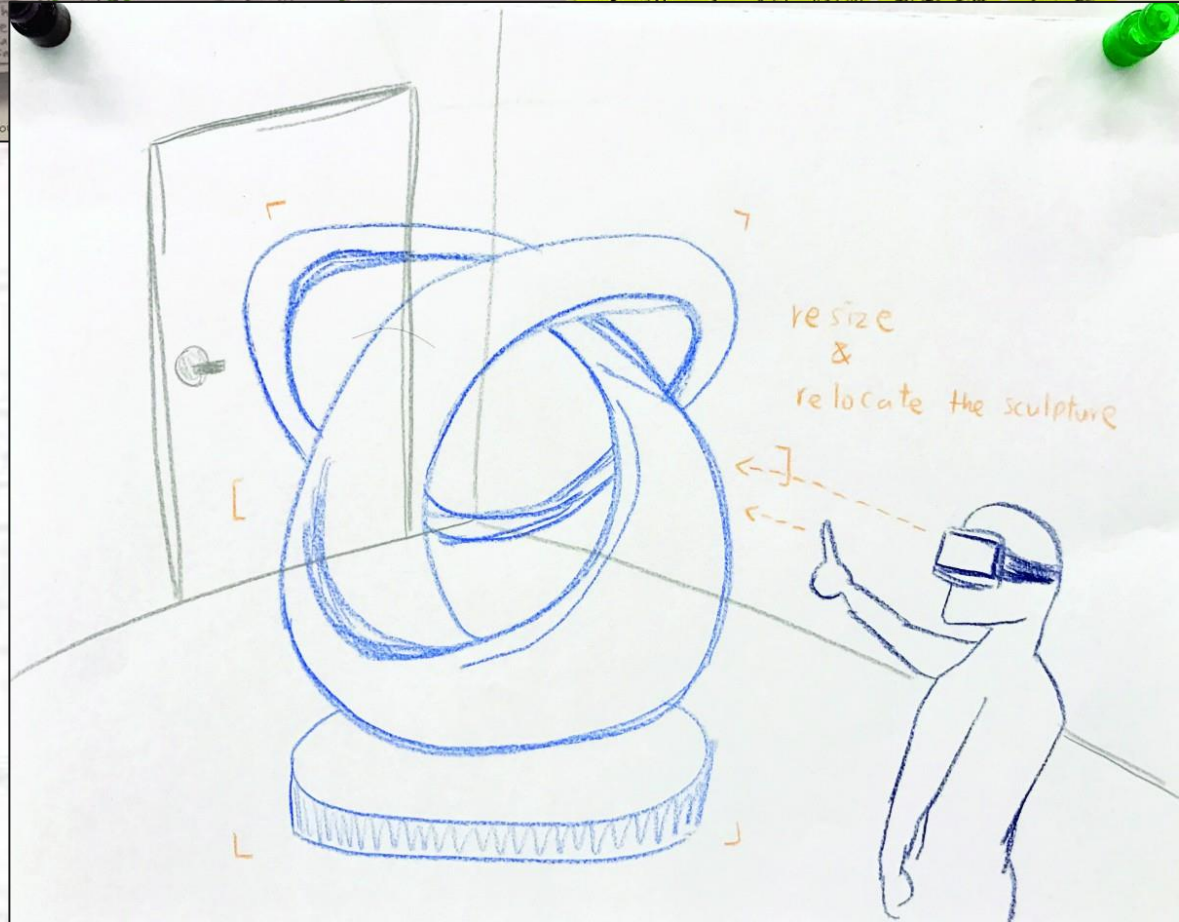
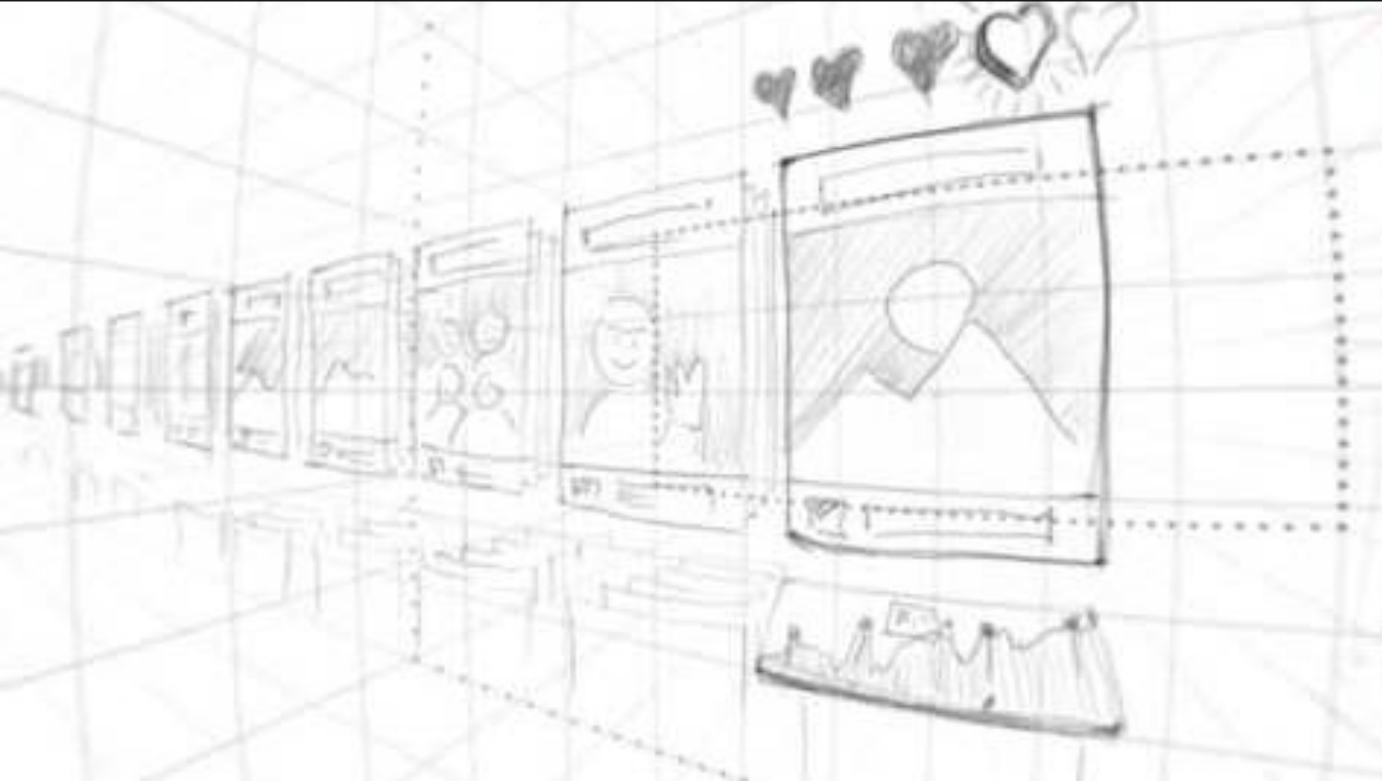
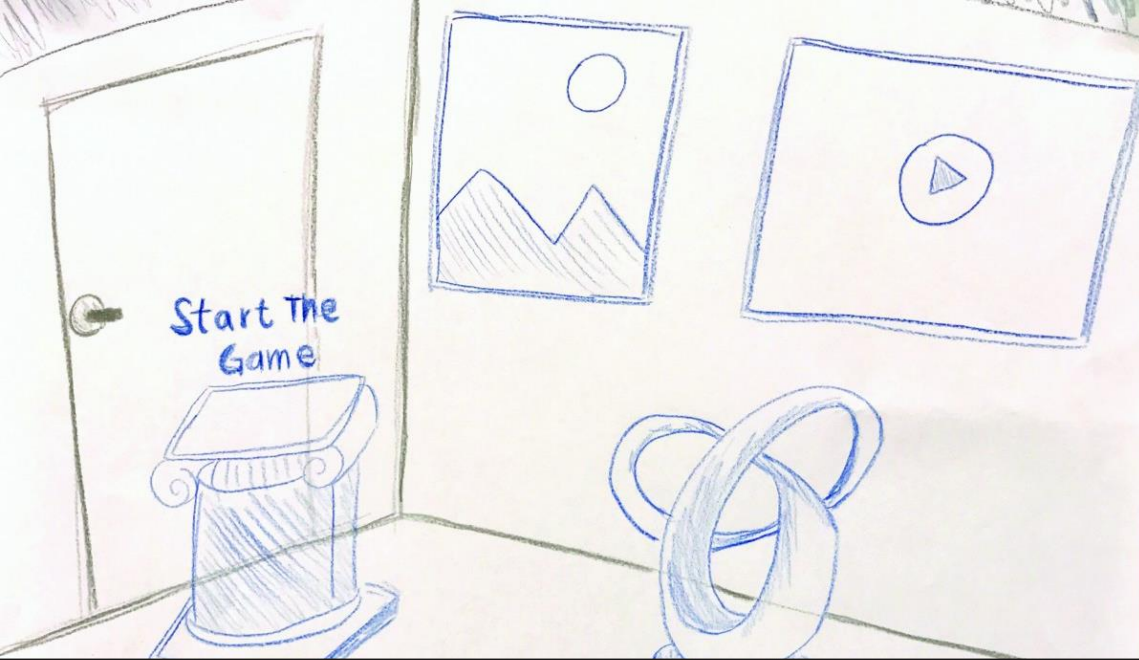
Tasks

- Why will someone do this task? (consider the user's goals)
- What information will be required to complete the task?
- What should be the end result of the task?

Create a detailed description for one **important** task which you will design for today. Describe the task as your described **important** user will perform it. (10 minutes)

2D Sketching.



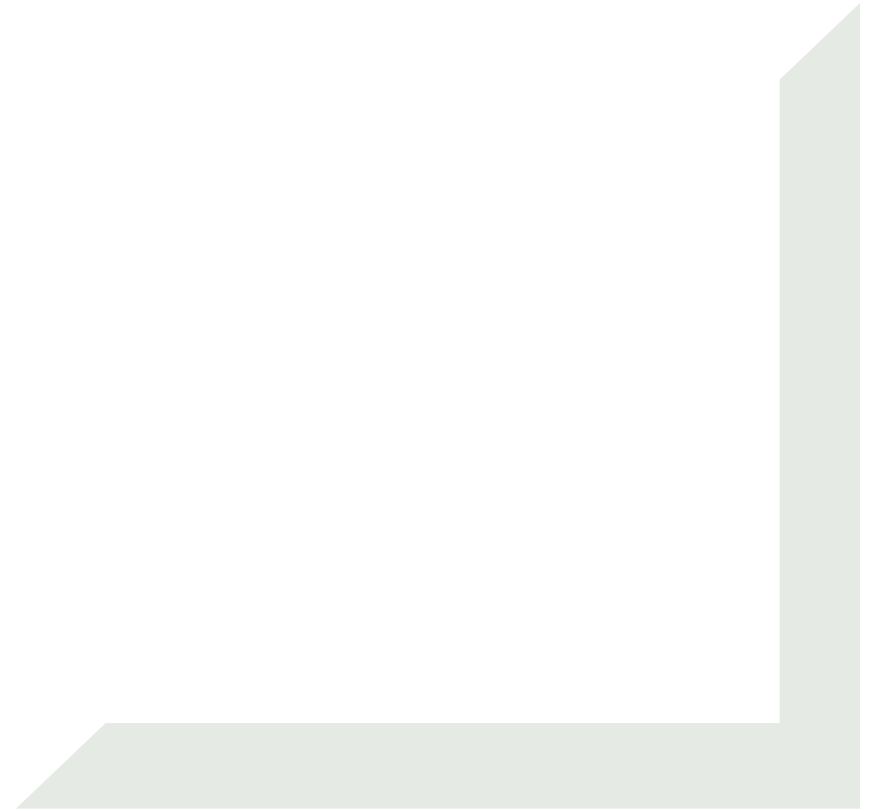


2D Sketches

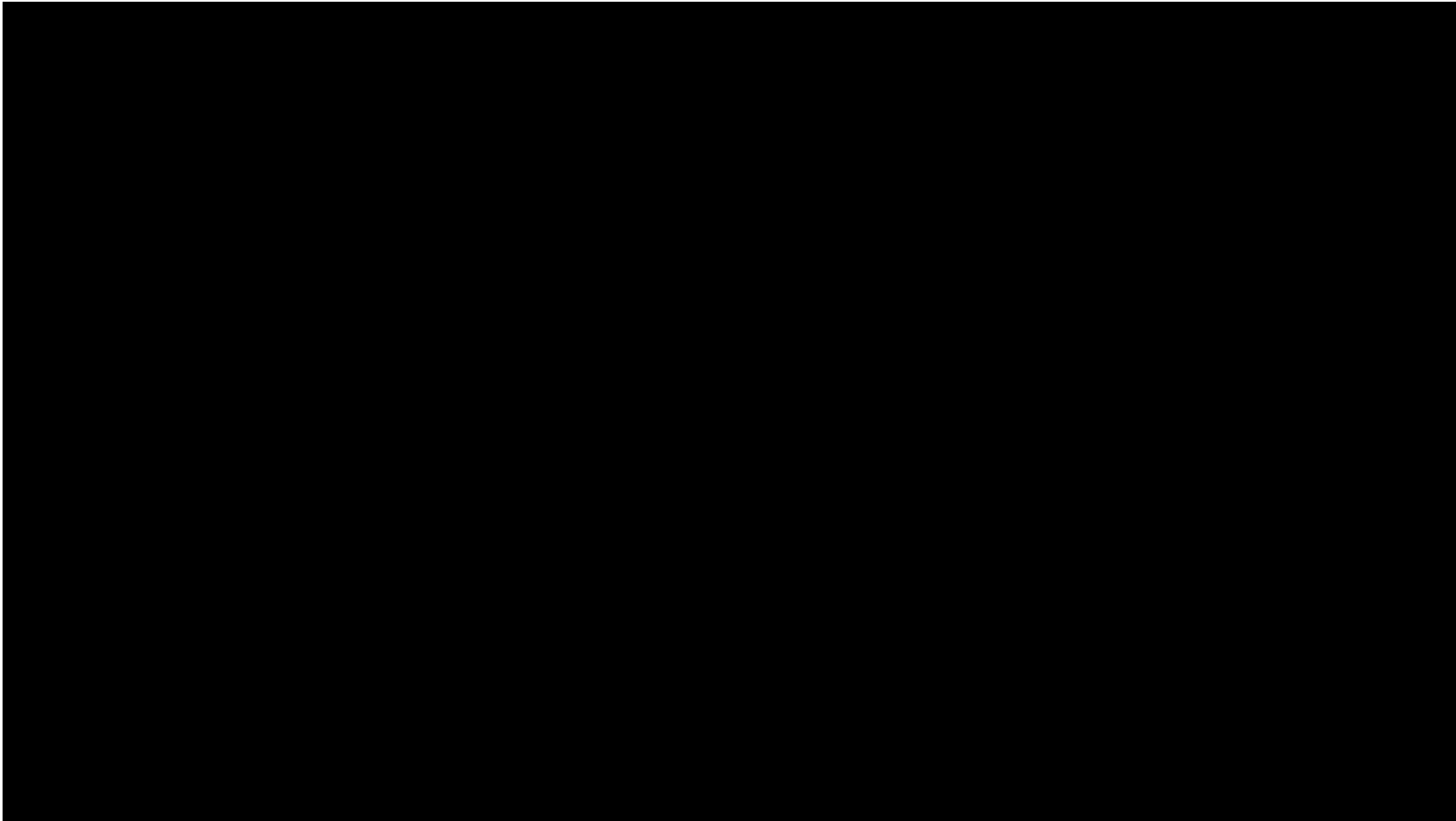
- Pen and paper
- What will your app look like?
- How will users interact with your app?

Sketch multiple versions of what your app might look like. Consider using storyboards to show how actions will take place. (30 minutes)

“3D” Sketching.



Hyperlens Prototype Example



Move your sketches into the real world

- Draw individual elements of your program on paper
- Cut them out
- Use additional prototyping supplies (Styrofoam, pipecleaners, etc.) to set up your interface elements in the physical environment
- “Interact” with them via your phone’s camera to carry out user tasks

(30 minutes)

Walkthrough presentations and
feedback session.

Yay feedback

What unexpected difficulties did you encounter while prototyping for mixed reality?

Discussion

Useful Links

- AR/VR Prototyping Article: <https://medium.com/inborn-experience/ar-vr-prototyping-cd765bad650f>
- HoloLens and Mixed Reality UX Design Article: <https://medium.com/@brian.hui/9-methods-for-hololens-mixed-reality-ux-design-94dc325df7d1>
- Incomplete list of prototyping tools:
 - <https://www.sketchapp.com/>
 - <https://www.sketchbox3d.com/>
 - <https://proto.io/>



Prototype everything!

Questions?