Medium Fidelity Prototyping

No screens

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COMS 4170

15 April 2020

Say your name

The Iterative Design Process

Challenge

Brainstorm & Research

Problems and Solutions

Test them

Ideas

Identify technical risks and explore options

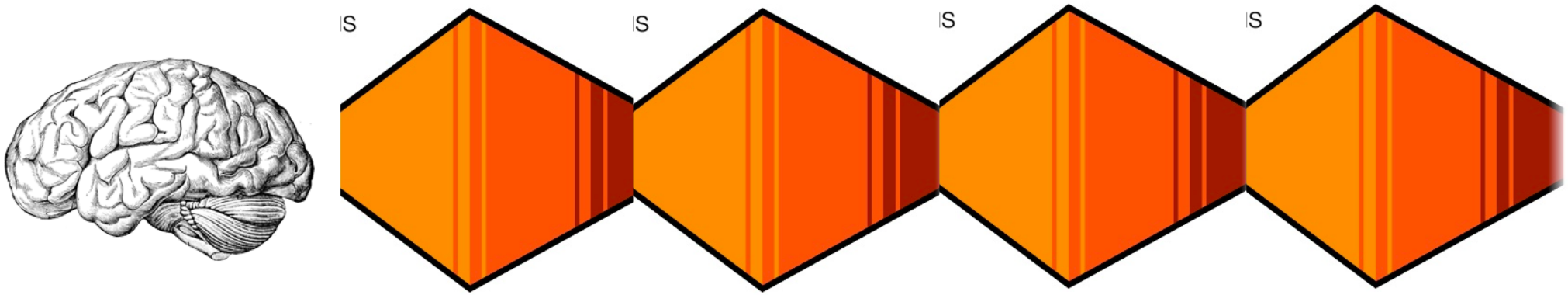
Test them

Product

Ideation

Implementation

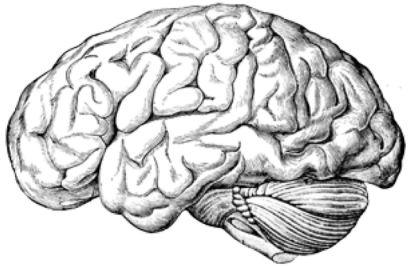
Design requires you it explore and test many risky features



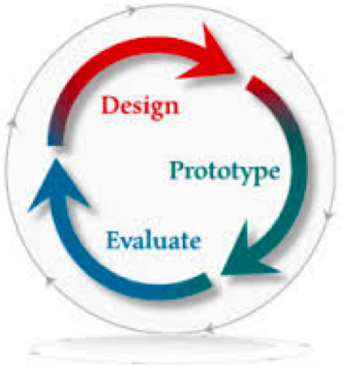
Idea

Product

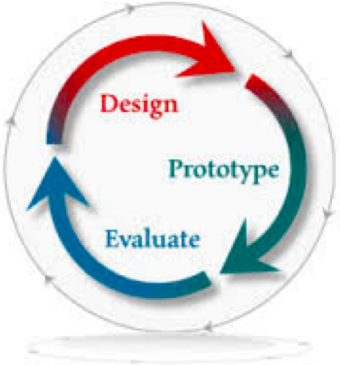
To minimize risk on novel designs, Use iteration on each risky aspect of the design



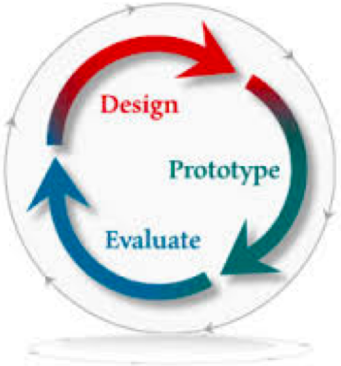
Idea



Touch screen



Soft keyboard



One button

Product

Here is a video of an idea.

Look for all the risky ideas to prototype!

Concepts to prototype

- Find *your* person
- Tracking and following the person
  - Tracking the soccer ball
- Recognize actions:
  - Scrolling through menu option
  - Fist to select option
- Project a soccer goal on the group
- How to pull up the menu
- Throw the menu on the wall
  - Select on wall
  - Spin
- NIGHTTIME ONLY – can you even fucking see it during the day.
- Interact with other drones
  - Crash?
  - Interact with other objects: collision avoidance
- Distinguish between fist to interact with drone or a person?
- USE THE HAND to project on
  - Touch select
- What if your hands are full?
- PATH!!!! How does it know where the roads are?
  - Map, gps
- UNDO?
- Going on a run – how does it track fitness?
- SECURITY RISK
  - So flashy – makes you a target.

Concepts to prototype?

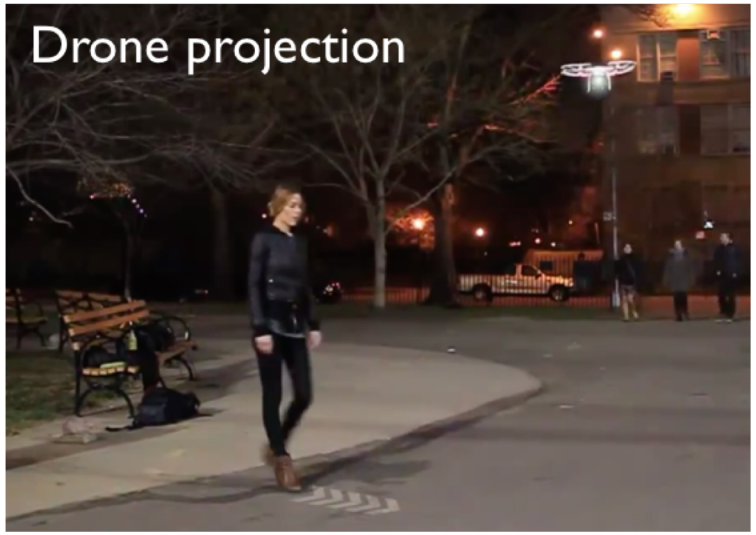
What did they prototype?

See what they actually focused on first.

What did they actually prototype?

- How fast can users select menu items.
  - Can they select them at all.
  - How accurate
  - Getting to the part of the menu
    - The rotating thing
  - Move your hand over the item
- Didn’t show outdoor daylight
- Camera, projector, itouch
  - WILL IT FLY
- Indoor study:
  - Avoiding Wind, lights
- BATTERY LIFE
- Drift was distract
- Computational power
  - No remote server!!!!
- HUMAN DETECTION
  - How long does it take to recognize a
    - Person
    - Action
  - Do you enjoy it?

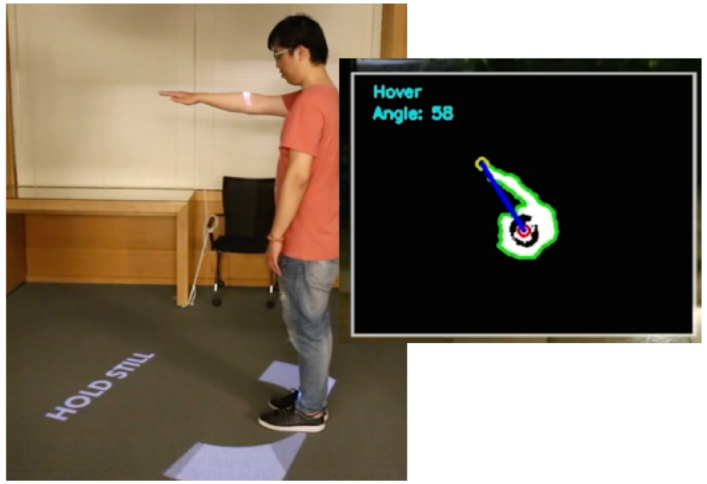
Concepts



Prototypes

Can the drone carry the stuff?

Can the drone detect hand position?

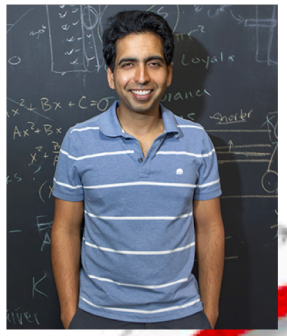


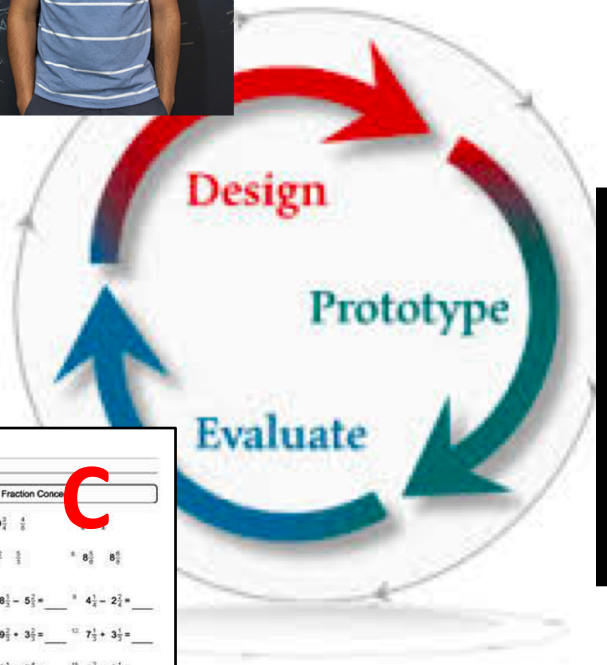
They discovered a BIG problem.

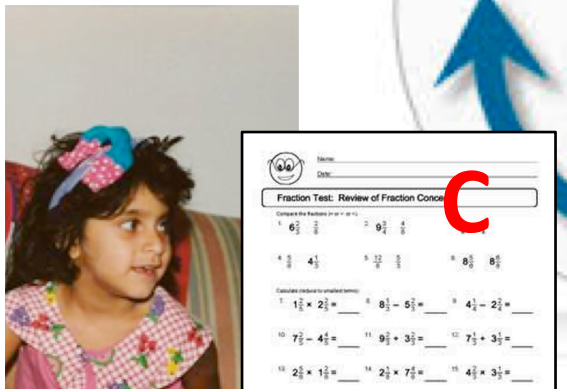
How could they have avoided learning this two years into the project?

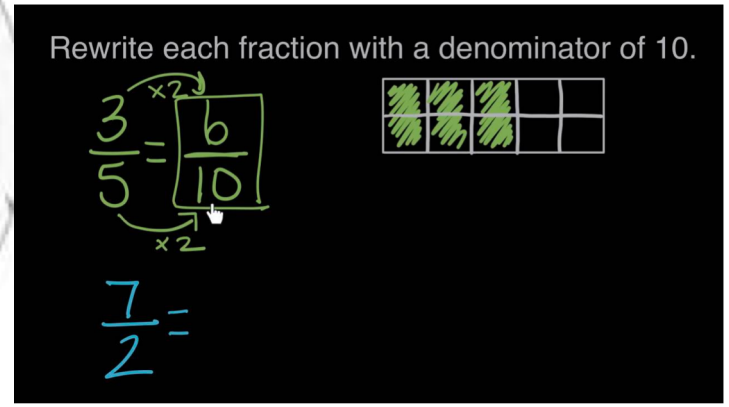
By prototyping this risk on users in the environment

How do I solve problems?







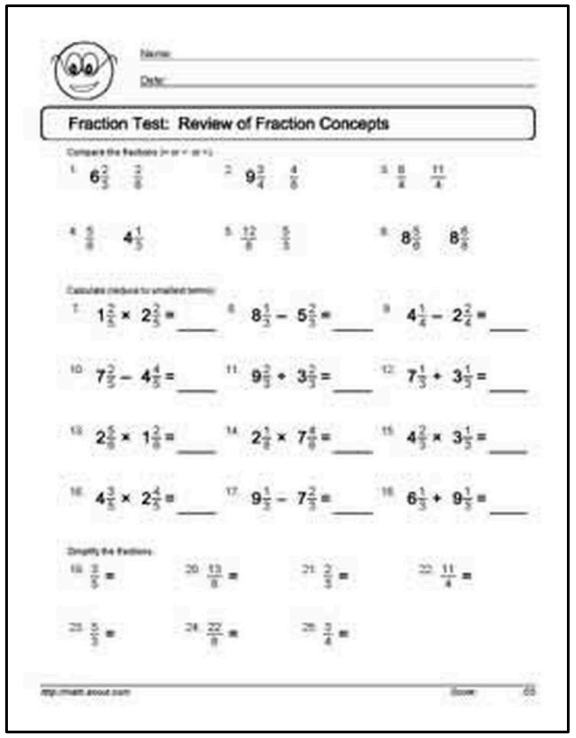


By learning from prototyping and testing on users in the environment

How do I **select** a problem?

Nadia, age 11

Ace this fractions test

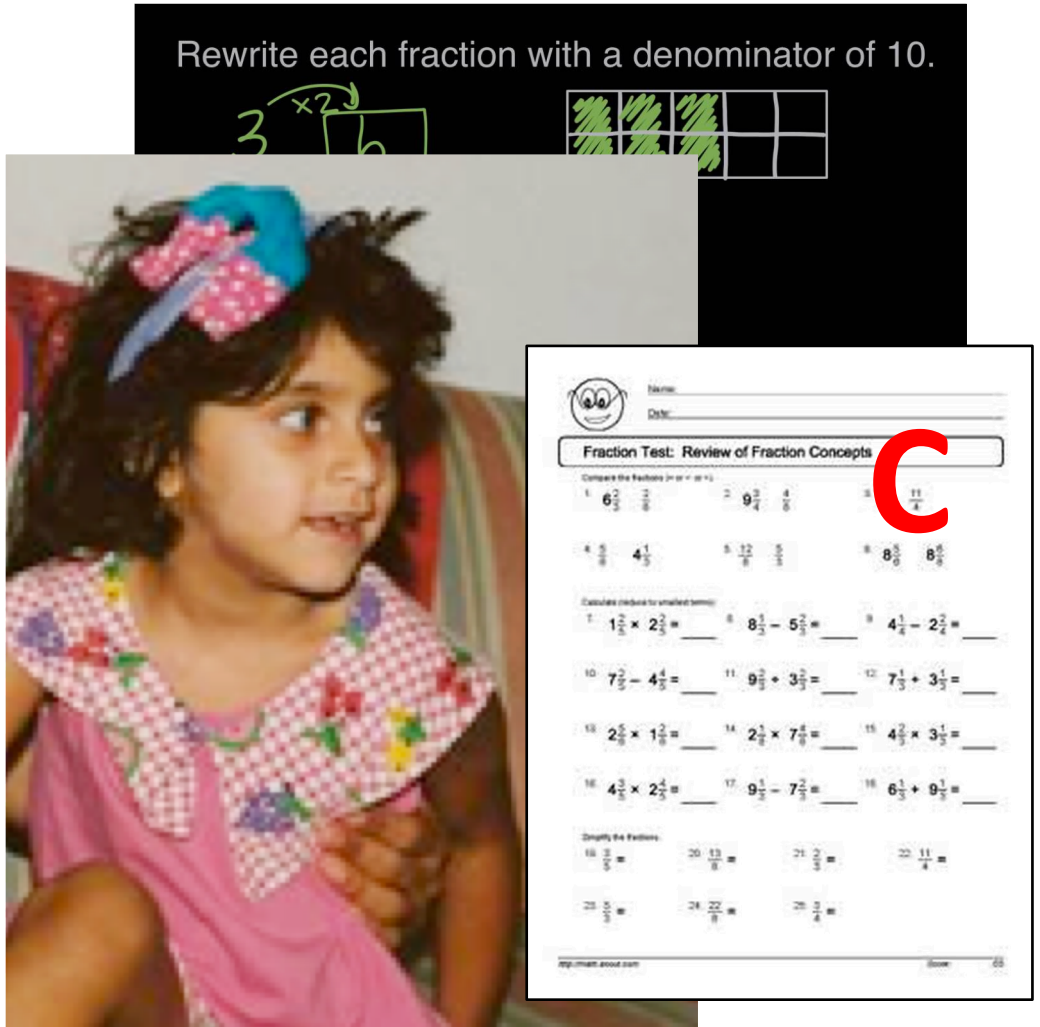


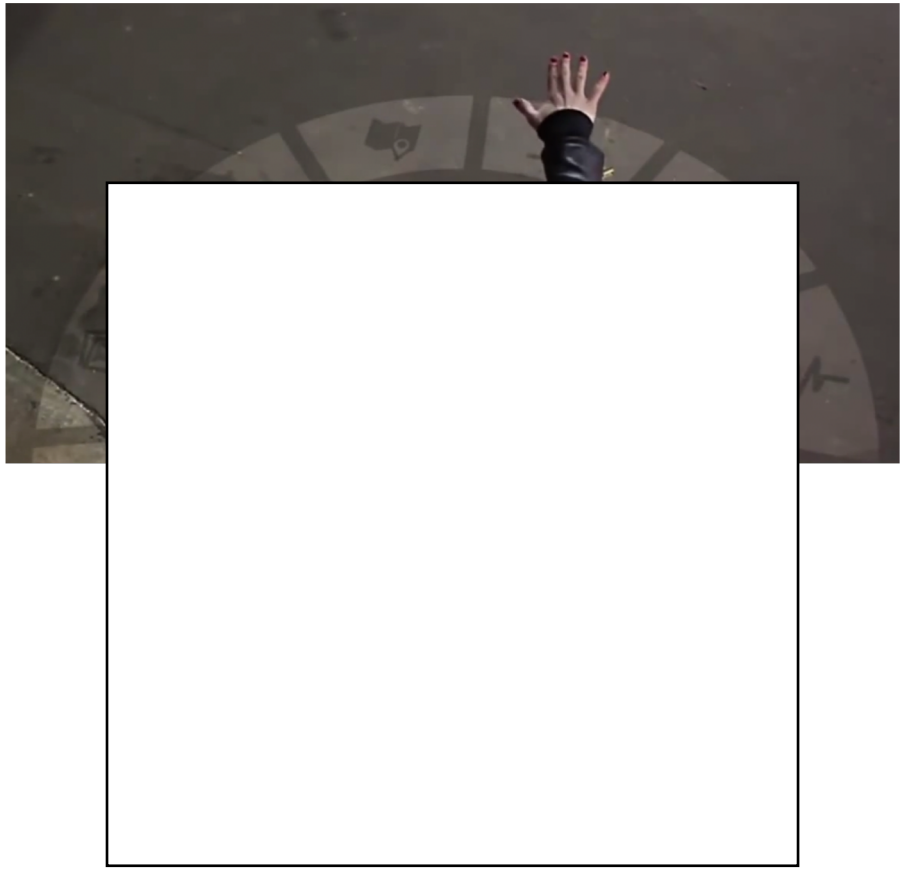
Identify a **specific person** with a **specific need**

Who is the specific person and specific need?

No one.

Starting with a single real user is better than a starting with a flashy idea with no user or need





How will you continue to prototype and test risks?

Option 1. A Technical Prototype

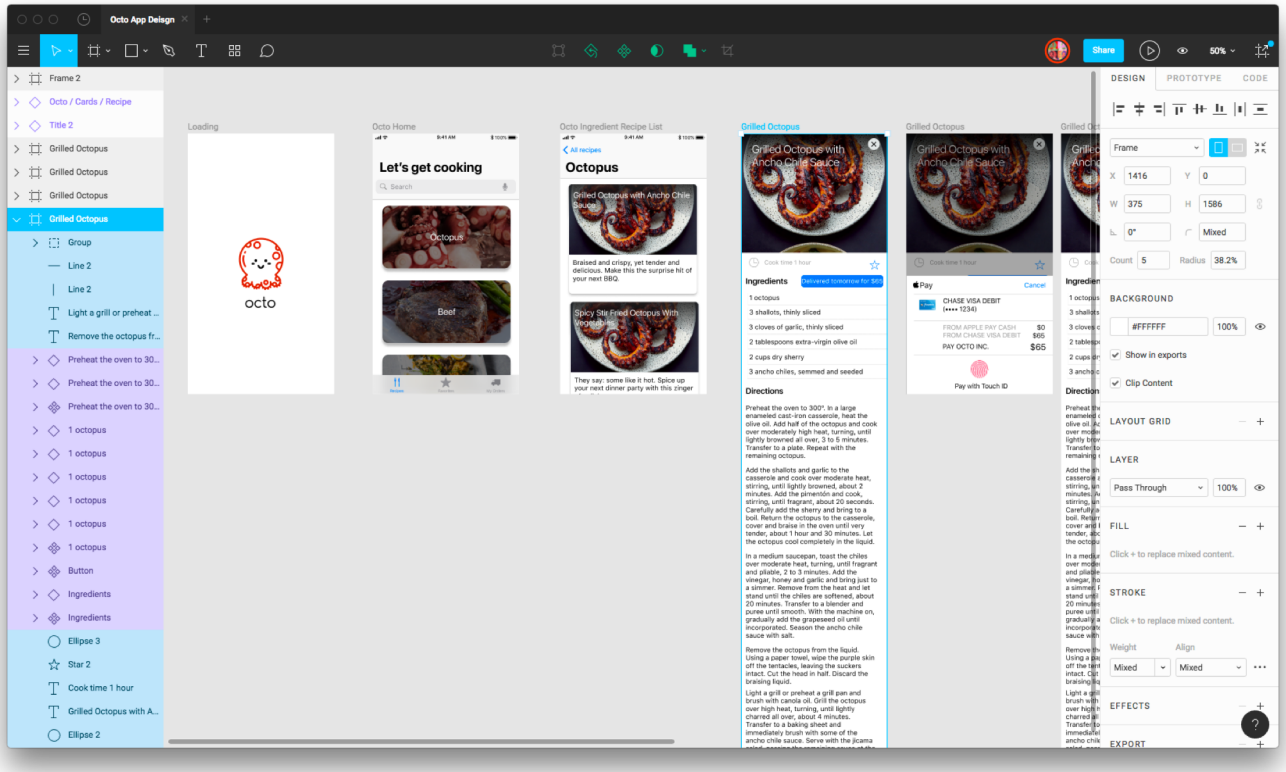
What technical elements do I need to get working?

- Drag and drop
- Playing videos at different speeds
- Playing notes on a piano

- Routes and Navigation

Set a goal for yourself - email it to your TA for comments and approval.
Implement it.
Get Feedback. Test it on someone (or at least show it to someone) to get feedback

Option 2. A Look-and-Feel Prototype: Figma

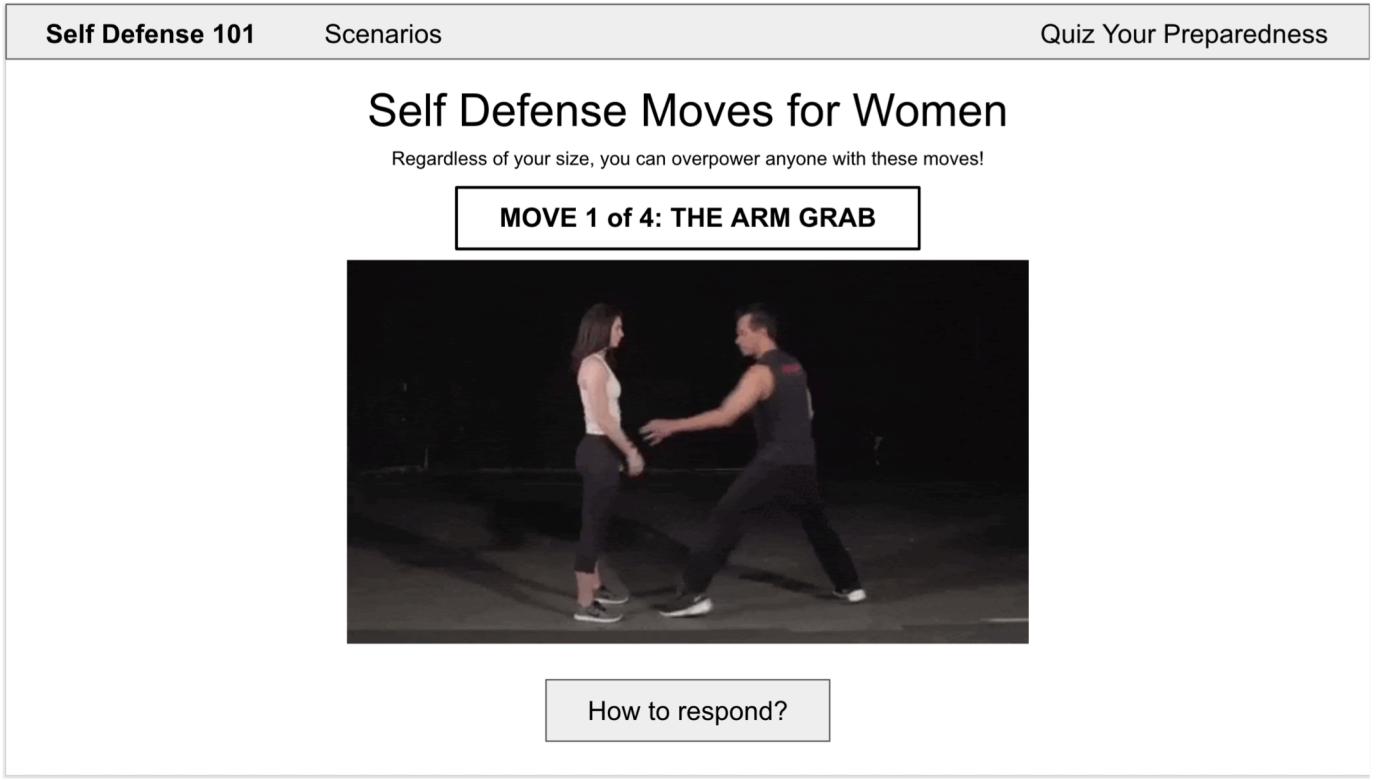


As far as I know, none of the prototyping tools (figma, InVision, Adobe XD allow you to play video or audio files.

However, Google Slides does.

So you could great UI images in Figma, And load them into Slides, then place the videos and sounds on top of it.

Option 2. A Look-and-Feel Prototype: Slides



Self Defense 101

No matter your size, you can defend yourself against anyone.

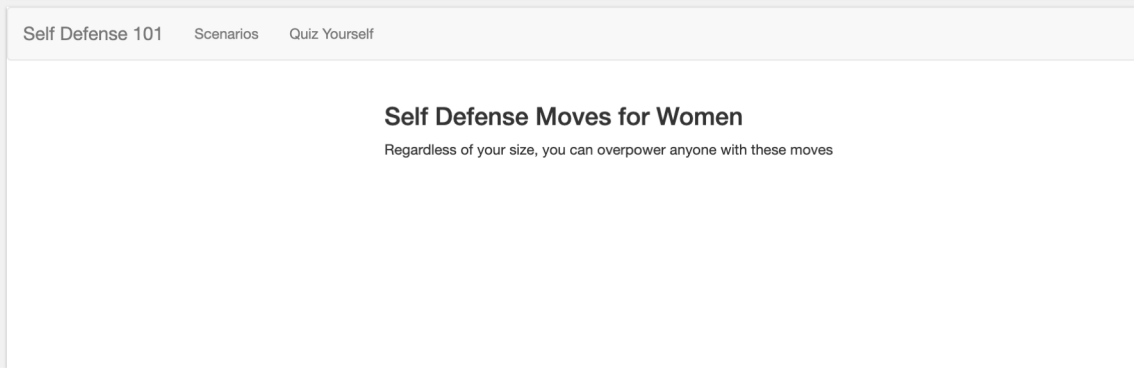
1. The arm grab

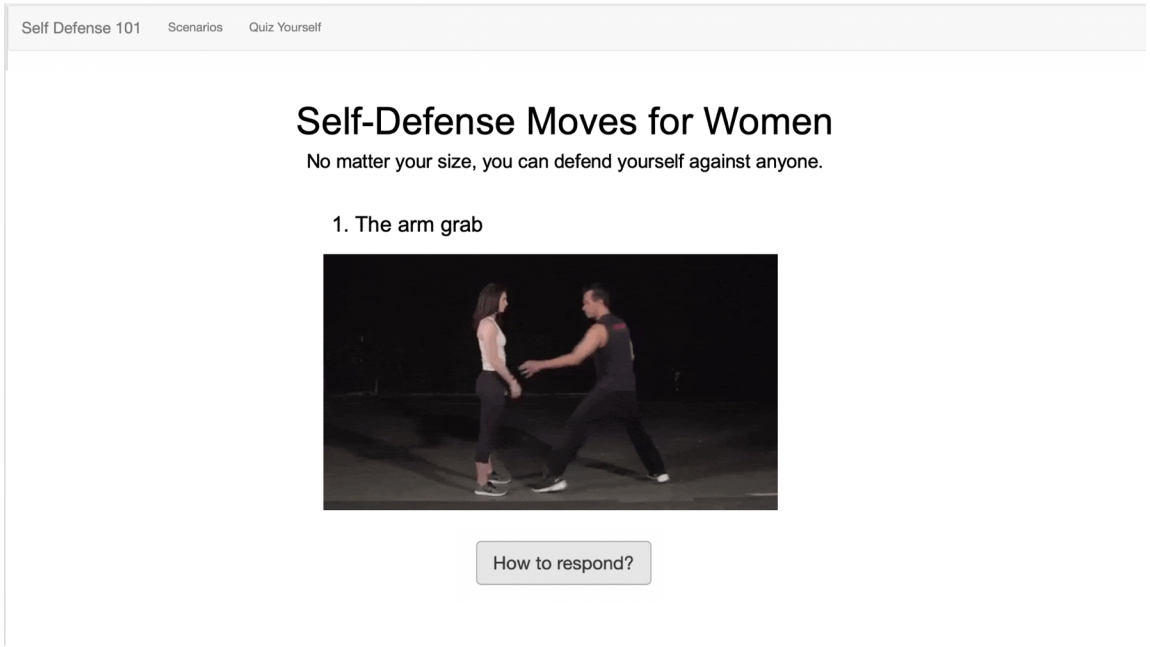
How to respond?

Pro Tip: take screenshots of HTML widgets

Run »

```
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
</head>
<body>

<nav class="navbar navbar-default">
  <div class="container-fluid">
    <div class="navbar-header">
      <a class="navbar-brand" href="#">Self Defense 101</a>
    </div>
    <ul class="nav navbar-nav">

      <li><a href="#">Scenarios</a></li>
      <li><a href="#">Quiz Yourself</a></li>
    </ul>
  </div>
</nav>

<div class="container">
  <h3>Self Defense Moves for Women</h3>
  <p>Regardless of your size, you can overpower anyone with these moves</p>
</div>

</body>
</html>
```





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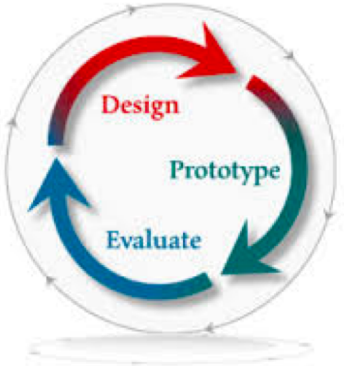

Homework 11: Due Wednesday 4/22

- Improve your prototype and move to a medium-fidelity design
  - Set a **design** goal
  - **Implement**
  - **Evaluate**

Wednesday People:
Fill out participation when you see the video!

Columbia University

User Interface Design

COMS 4170 · Spring 2020

Home Grading Syllabus Piazza

12	APRIL 13	APRIL 15	APRIL 17
	MW group sessions with TA	Homework 10 due @ 4pm Participation Form Homework 11 out soon!	Lecture Friday group sessions with TA