VR Prototypes

Aframe + Glitch
What is aframe?

- Web VR framework
- Built on top of HTML
  
  ```html
  <head>
      <script src="https://aframe.io/releases/0.5.0/aframe.min.js"></script>
  </head>
  ```

- Uses three.js
- Works with Vive, Daydream, GearVR, and Cardboard and Desktop
Entity + Components

- Entities - the base of all objects in the scene. Without components, entities do not render anything, similar to empty `<div>`s.
- Components - reusable modules attached to entities to provide appearance, behavior, functionality.
- Use components to build things
- Box = Position + Geometry + Material
- Find community components at: https://aframe.io/aframe-registry/
Scene

```html
<a-scene>
</a-scene>
```
Entity

```html
<a-scene>
  <a-entity>
  </a-entity>
</a-scene>
<a-scene>
</a-scene>
```
Components

```html
<a-scene>
  <a-entity geometry="primitive:sphere" material="color:silver">
  </a-entity>

  <a-entity geometry="primitive:sphere" material="color:red"
    position="0 0 -4"></a-entity>

</a-scene>
```
What is Glitch

- Host a web app online for free
- View live demos
- Collaborate with others
- Host assets
Glitch

Code we will be starting with today:

https://glitch.com/edit/#!/madlab

Here is a demo of what we’re hoping to get!

https://madlab.glitch.me/
Other cool projects to remix:

- Aframe Aincraft: https://glitch.com/~aframe-aincraft
- 360 Image Gallery: https://glitch.com/~aframe-gallery

... and more in the A-Frame docs
Events

- Events are a way to send out a signal that other code can pick up and respond to.
- Entities can emit events others listen to.
- Entities can also listen for certain events and respond to those events.
- Events contain information about what happened.
Emit an Event

- To emit events use: `element.emit(eventName, eventDetails)`
- `entityEl.emit('physicscollided', {collidingEntity: anotherEntityEl});`
Where to find 3D models

- Sketchfab
  - Eg. https://sketchfab.com/models/5be6368dce4f8c8b580d6692ffb333
- Clara.io
- Archive3D
- Sketchup’s 3D Warehouse
- Or create your own using Blender or MagicaVoxel
Useful sources

There is so much more to A-Frame. To learn more visit the A-Frame docs:

https://aframe.io/docs/0.5.0/introduction/

Also check out the A-Frame registry for more components:

https://aframe.io/aframe-registry/