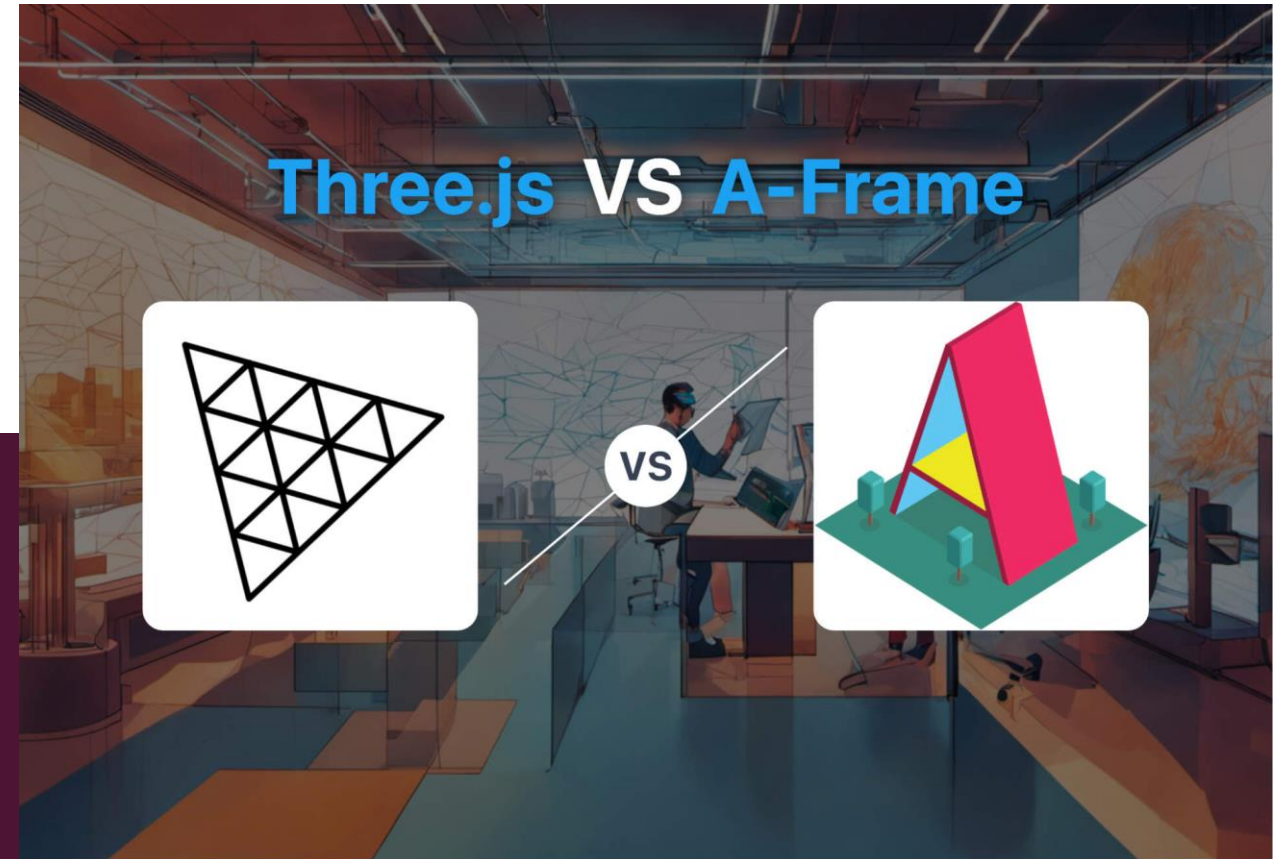


WEBVR APPLICATION USING A-FRAME

ASSIGNMENT 1 - INDIVIDUAL



A-Frame is an open-source framework that uses Three.js in its implementation

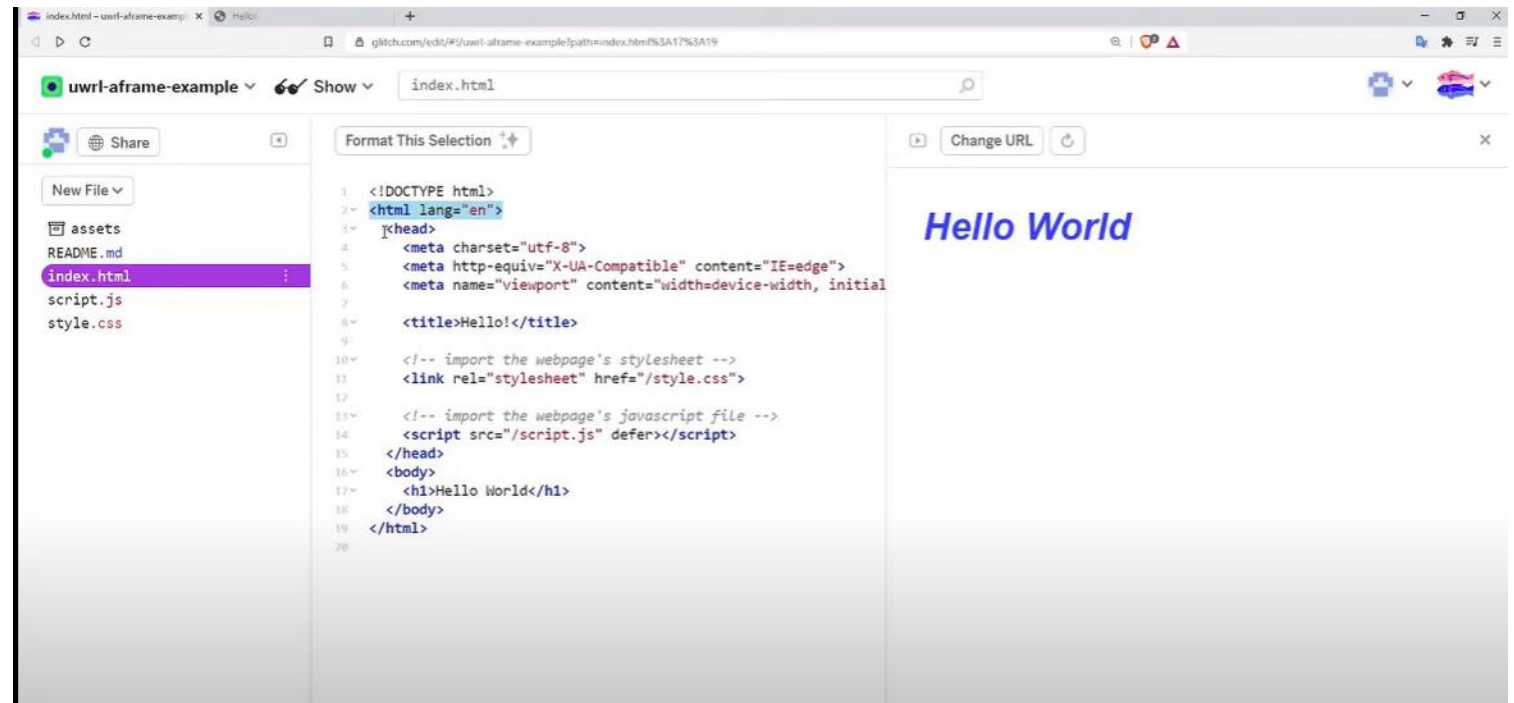
EXPLORE & EXPERIENCE

- <https://coastalworld.com/>
- Click **Coastalworld** and play it around
- Are you aware you are now on a Web Browser and playing around with 3D worldview?
- Let's explore how to make sense VR on a web browser



I) USING GLITCH.COM AND A-FRAME

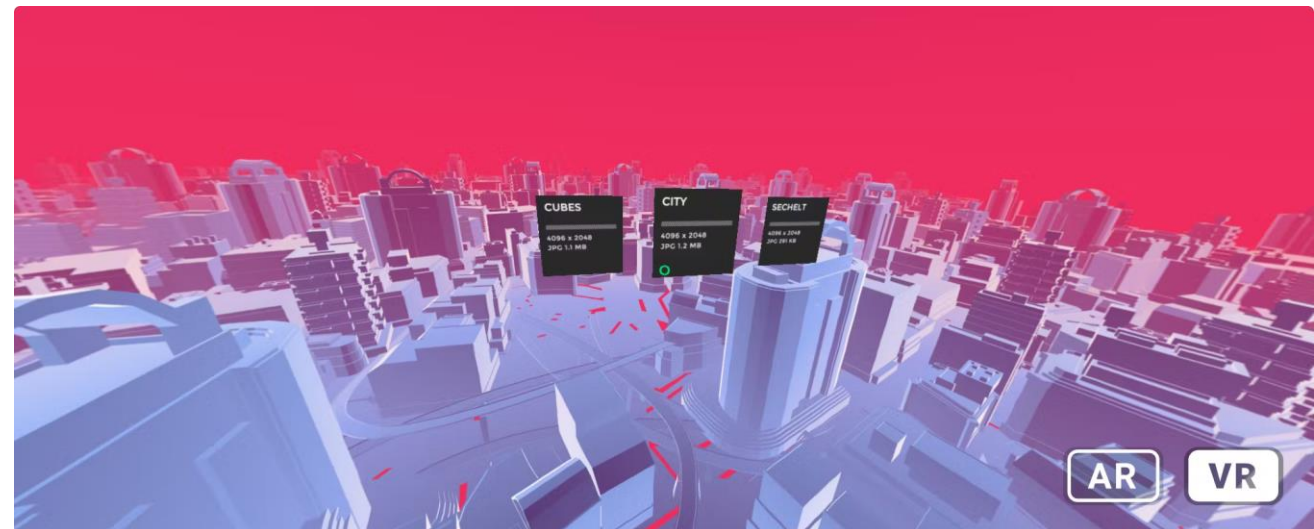
- You can use the Glitch editor
 - https://www.youtube.com/watch?v=k_nzmsl2rLpg&list=PL8bmX9eBPGGOCQbGPw9VKWQfYyGZNP&index=2
- Or more guide about editor
 - https://www.youtube.com/watch?v=-Q_FIByQUAI&list=PLP3KjRITMw7ekqC4o5gy0rR4odw7Jga84
- If you want to use localhost
 - https://www.youtube.com/watch?v=K_IRdCVuu98
- Load glTF models in A-Frame
 - https://www.youtube.com/watch?v=e_qiH5_CZDO0
 - You can download model and animated your model using **Mixamo**



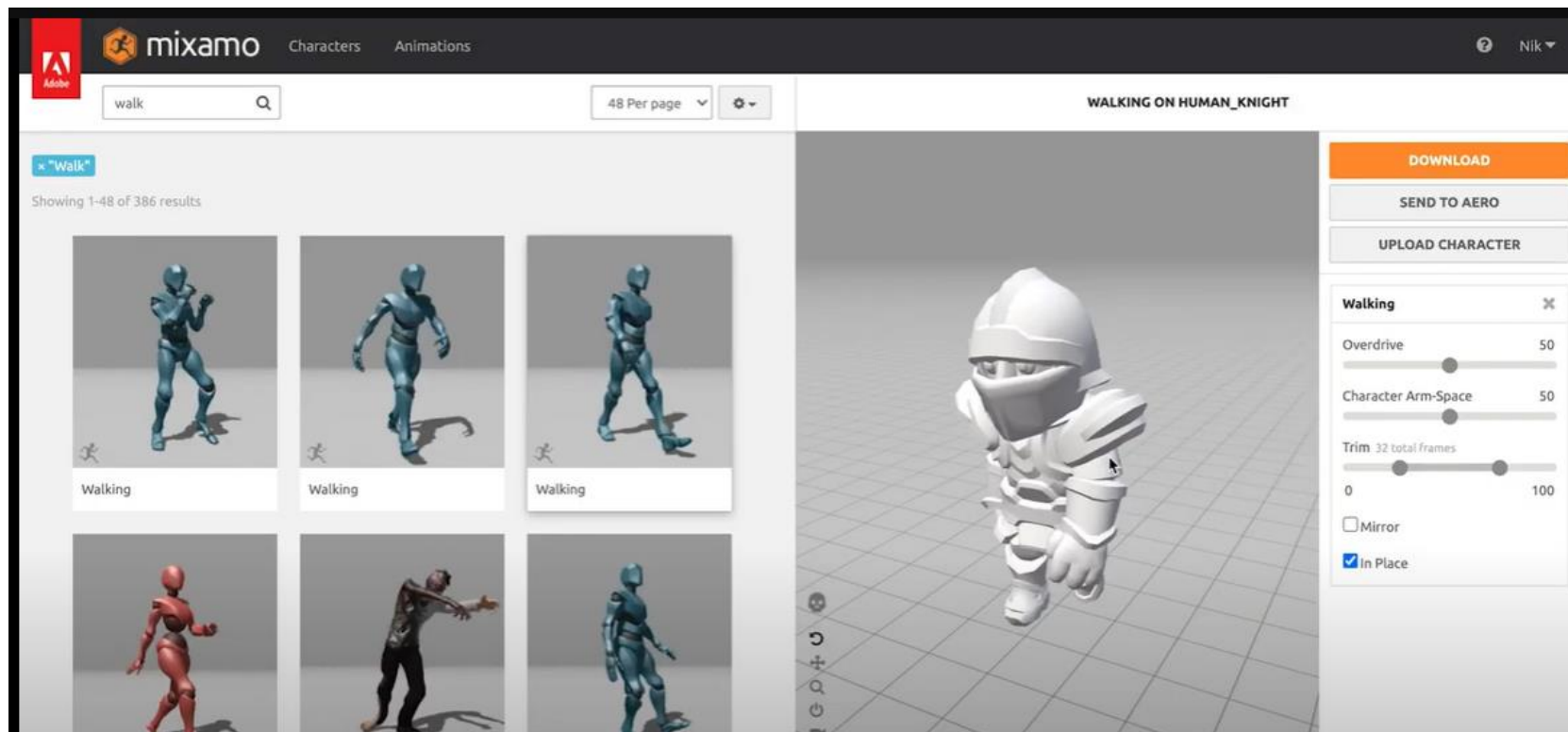
GUIDELINES

- Do not need UNITY game engine, this is web-based applications
- **A-Frame** is an open-source framework that uses Three.js in its implementation, and you can manipulate it using JavaScript just like other web applications. In A-Frame, you can write cross-platform VR apps that users on multiple device types can access
 - <https://aframe.io/docs/1.2.0/introduction/>
- What is **glitch**? Glitch provides an online code editor. The editor supports both front-end and back-end code as well as multiple files and directories. Glitch lets us remix (i.e., copy) existing projects and make them our own and instantly host and deploy changes for everyone to
 - <https://glitch.com/edit/#!/aframe?path=index.html%3A1%3A0>

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title>Hello, WebVR! - A-Frame</title>
5 <meta name="description" content="Hello, WebVR! - A-Frame">
6 <script src="https://aframe.io/releases/0.5.0/aframe.min.js"></script>
7 </head>
8
9 <body>
10 <a-box position="-1 0.5 -3" rotation="0 45 0" color="#4CC3D9"></a-box>
11 <a-sphere position="0 1.25 -5" radius="1.25" color="#EF2D5E"></a-sphere>
12 <a-cylinder position="1 0.75 -3" radius="0.5" height="1.5" color="#FFC65D"></a-cylinder>
13 <a-plane position="0 0 -4" rotation="-90 0 0" width="4" height="4" color="#7BC8A4"></a-plane>
14 <a-sky color="#ECECEC"></a-sky>
15 </a-scene>
16 </body>
17 </html>
```



2) ANIMATED YOUR CHARACTER WITH MIXAMO




<https://www.mixamo.com/>


You can download a free model online and animate the model using Mixamo. Mixamo is an additional step not a part of A-frame, it is to find your 3D assets.


INDIVIDUAL ASSIGNMENT EXPECTED OUTPUT


- Explore **A-FRAME** to build a simple VR scene with a character animation
- Explore **Mixamo** to animate your character
- You can **use A-frame with Glitch** or any your preference editor
- Below are a few other **A-Frame Glitches** for starters:
 - [aframe-aincraft](#) - Minecraft demo.
 - [aframe-gallery](#) - 360° image gallery.
 - [aframe-registry](#) - Showcase of various components.
 - [aframe-vaporwave](#) - Retro-futuristic scene.
 - [networked-aframe](#) - Multiuser.
- <https://github.com/aframevr/aframe>
- A-Frame Assets - <https://github.com/aframevr/assets>

BASIC INTERACTION EXAMPLE IN VR

 aframe-basic-interaction

 Settings

 Assets

 Files

LICENSE.md

README.md

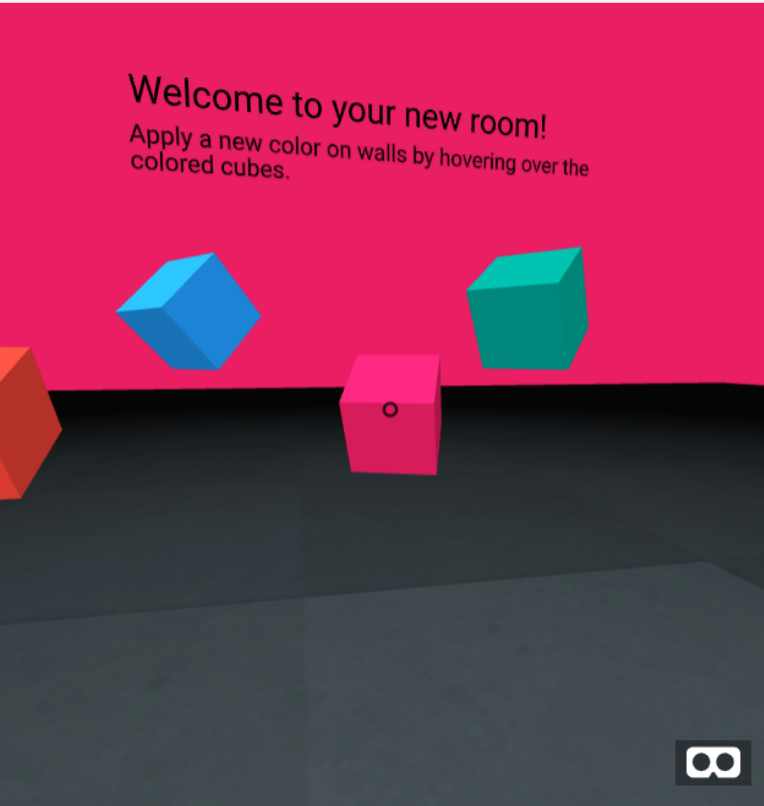
index.html

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Basic Interactions - A-Frame</title>
5   <meta name="description" content="Interactions - A-Frame">
6   <script src="https://aframe.io/releases/0.7.0/aframe.min.js"></script>
7   <script src="https://unpkg.com/aframe-event-set-component@3.0.3/dist/aframe-event-s
8 </head>
9 <body>
10 <a-scene>
11   <a-assets>
12     
13   </a-assets>
14
15   <a-text value="Welcome to your new room!" position="-1.5 4 -5" color="#000" scale=
16   <a-text value="Apply a new color on walls by hovering over the colored cubes." po
17
18   <a-box position="-3 1 -5" rotation="0 90 30" scale="" color="#F44336"
19     event-set__enter="_event: mouseenter; _target: #bg; color: #F44336">
20   </a-box>
21   <a-box position="-1 2 -5" rotation="0 45 45" scale="0.75 0.75 0.75" color="#2196F
22     event-set__enter="_event: mouseenter; _target: #bg; color: #2196F3">
23   </a-box>
24   <a-box position="2 2 -4" rotation="0 45 30" scale="0.75 0.75 0.75" color="#009688
25     event-set__enter="_event: mouseenter; _target: #bg; color: #009688">
26   </a-box>
27   <a-box position="1 1 -5" rotation="0 70 30" scale="0.9 0.9 0.9" color="#E91E63"
28     event-set__enter="_event: mouseenter; _target: #bg; color: #E91E63">
29   </a-box>
30
31   <a-entity laser-controls="hand: left"></a-entity>
32   <a-entity laser-controls="hand: right"></a-entity>
33
34   <a-sky id="bg" color="#fff"></a-sky>
35
```

aframe-basic-interaction.glitch.me/

Welcome to your new room!

Apply a new color on walls by hovering over the colored cubes.



<https://glitch.com/edit/#!/aframe-basic-interaction?path=index.html%3A1%3A0>

ESCAPE ROOM EXAMPLE IN VR

The image shows a web editor interface for a VR escape room example. On the left is a sidebar with a file explorer showing files like `.env`, `LICENSE.md`, `README.md`, and `index.html`. The main area displays A-Frame code for a scene titled "Escape the Room". The code includes various scripts for physics, teleportation, and player controls, and defines a scene with a forest environment and a player entity with hands.

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta charset="utf-8">
5     <title>Escape the Room</title>
6     <meta name="description" content="Escape the Room">
7     <script src="https://cdn.rawgit.com/aframevr/aframe/14027d32/dist/aframe-master.min.js"></script>
8     <script src="https://unpkg.com/super-hands/dist/super-hands.js"></script>
9     <script src="https://unpkg.com/aframe-physics-extras/dist/aframe-physics-extras.js"></script>
10    <script src="https://dist.3d.io/3dio-js/1.x.x/3dio.min.js"></script>
11    <script src="//cdn.rawgit.com/donmccurdy/aframe-physics-system/v2.1.0/dist/aframe-physics-system.js"></script>
12    <script src="https://unpkg.com/aframe-event-set-component@^4.0.0/dist/aframe-event-set-component.js"></script>
13    <script src="https://rawgit.com/feiss/aframe-environment-component/master/dist/aframe-environment-component.js"></script>
14    <script src="https://rawgit.com/fernandojsg/aframe-teleport-controls/master/dist/aframe-teleport-controls.js"></script>
15  </head>
16  <body>
17    <a-scene physics environment="preset: forest">
18      <a-assets>
19        <a-mixin id="gazer" collision-filter="collisionForces: false"></a-mixin>
20        <a-mixin id="pointer" collision-filter="collisionForces: false"
21          teleport-controls="cameraRig: #player; collisionEntities: #teleport-rails"></a-mixin>
22      </a-assets>
23      <a-mixin id="ctrlr" physics-collider collision-filter="collisionForces: false"
24        super-hands="colliderEvent: collisions; colliderEventProperty: els; collisionEntities: #teleport-rails"
25        teleport-controls="cameraRig: #player; collisionEntities: #teleport-rails"></a-mixin>
26      <a-mixin id="collider-space" static-body material="visible:false"></a-mixin>
27    </a-scene>
28    <a-entity id="player" progressive-controls="objects: [grabbable], [droppable], [collidable]; gazeMixin: gaze; pointMixin: pointer"
29      <a-entity id="rightHand" class="right-controller"></a-entity>
30      <a-entity id="leftHand" class="left-controller"></a-entity>
31    </a-entity>
32  </body>
33</html>
```

On the right, a browser window shows the rendered VR scene at `wide-cream.glitch.me/`. The scene is a stylized forest with green trees and a checkered floor. A small logo is visible in the bottom right corner of the browser window.

<https://glitch.com/edit/#!/wide-cream?path=index.html%3A1%3A0>

SUBMISSION

- You are required to submit three deliverables
 - A demo reel - not exceeding 3 minutes. You can upload the video using a shared link or YouTube link (set it as an unlisted video) but make sure the link is not broken or missing link.
 - One-page report – your reflection and how you fulfill this assignment. State in your report your name and matric number. Provide your YouTube link (*your demo reel*) in the report. Report submitted in PDF format and cannot exceed one page.
 - Live demo link – I can click your link and play your apps
- Submit the 3 deliverables to my ymail ajunewanis@ymail.com – do not need to cc my utm email.
- To complete the assignment submission on Edredo – you just required to upload the report (pdf)

