**CS302L: SE Term Project**

| Team number | Team 9 |
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| Project Title | EduVerse |
| Document | SE Project Concept Document |
| Existing Work | Existing sites provide only 3d videos but not 3d environments. |
| Differences | We will provide a metaverse platform by creating an immersive and interactive 3d learning environment. |
| Technologies | MERN stack, Blender, Three.js, React-3-fiber |
| Customers | Students |

**Description**

There are no websites which provide a complete 3d atmosphere to the user.

We found some websites which show 3d animated video explanations but none of them have a 3d environment. And these sites are subscription based which makes it difficult for all sections to access it.We provide Metaverse platform that has the potential to revolutionize education by creating immersive and interactive 3d learning environments.

**Profile of Users**

1. Students

- Characteristics: Comfortable with technology, interested in interactive 3D learning environments, focused on accessing educational content.

2. Teachers/Instructors

- Characteristics: Need tools for creating and managing 3D educational content, monitoring student progress, and providing guidance.

3. Content Creators

- Characteristics: Responsible for creating high-quality 3D educational content, interactive lessons, and assessments. Require access to content authoring tools and support.

**Technology Stack**

Apart from the basic MERN stack we will require few three.js wrappers and physics simulation libraries

* React-three-fiber (https://github.com/pmndrs/react-three-fiber) : React wrapper for three.js library to implement 3D canvas and environment. It is the most widely used library for 3D web development.
* React-three-rapier (https://github.com/pmndrs/react-three-rapier) : It is a react wrapper library build around Rapier. Rapier is a fast 2D and 3D physics engine.
* React-XR (https://github.com/pmndrs/react-xr) : This react warpper around the WebXR will enable us to prepare the 3D environment for VR and XR rendering.
* Blender : We will use Blender which is a free and open-source 3D computer graphics software tool to create 3D models.