Immersive Search Project

Team:

Anmol Desai
Jash Dhakad
Nidhi Goenka
Shreya Parikh
Vishwa Shah
Sameer Thummalapally
Cheng Yuan

Stage 4: Prototype

Tools:

- Considering the fact that we wanted to build a 3d model, we used Unity.
- Unity is basically a real time 3D development platform and cross-platform game engine which can be used to make virtual reality and augmented reality systems and is one of the most developer friendly and easy to use tools available.
- We used the Unity 2017.3.0 Version.
- To customize the behaviour of the objects created by application, we have made use of C# scripts.

Assets:

- Cars
- EasyRoads3D
- Materials
- Mega Fantasy Props Pack
- Room
- SampleScenes
- Stone
- Streets
- Water FX Particles
- Standard Assets

Standard Assets:

- 2D
- Cameras
- Characters
- CrossPlatformInput
- Editor
- Effects

- Environment
- Fonts
- ParticleSystems
- PhysicsMaterials
- Prototyping
- Utility
- Vehicles

Roles:

Shreya: 3D Development (Unity)

Anmol, Jash, Vishwa: Environment Design, Documentation

Cheng, Nidhi, Sameer: Suggestions and Input

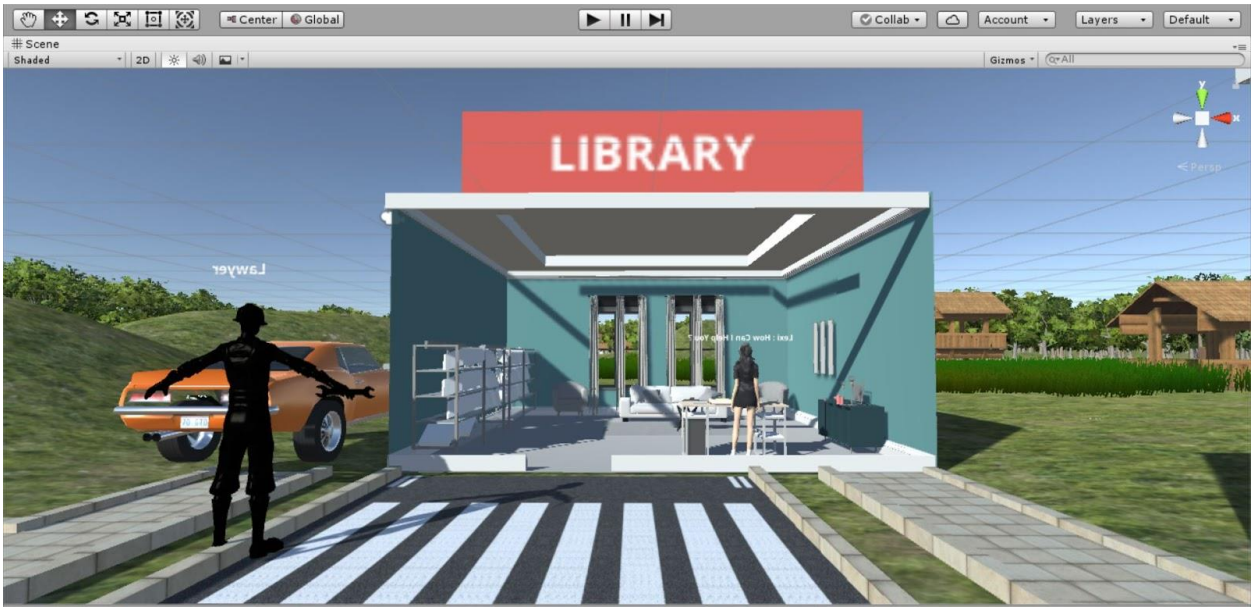
Prototype:

Video Link: https://www.youtube.com/watch?v=qEwdisYRpQ8&feature=youtu.be

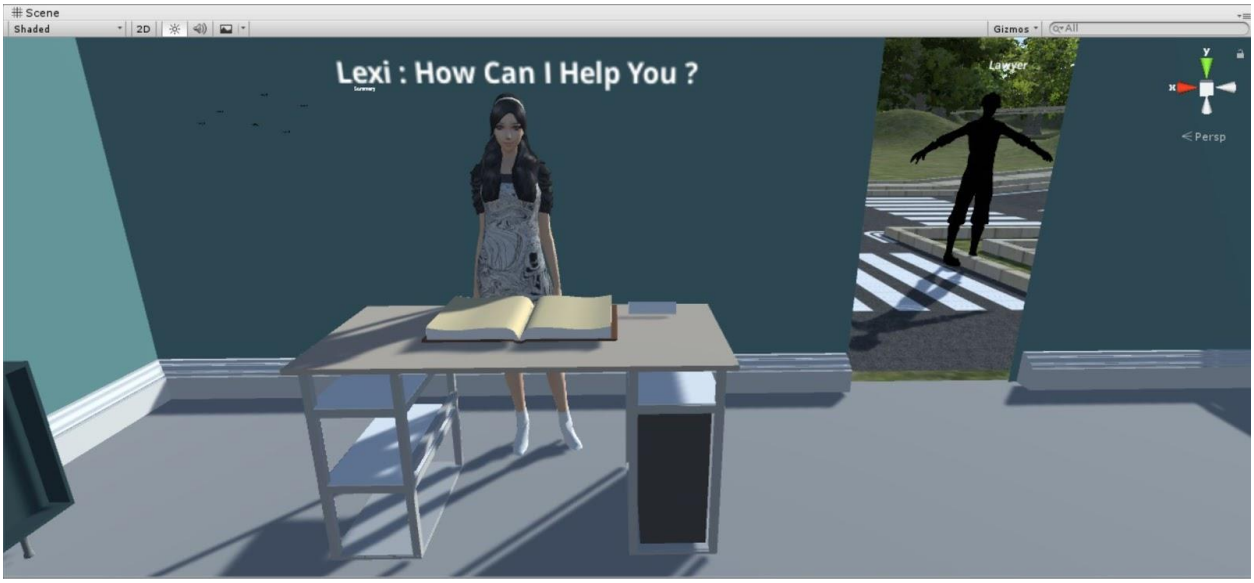
Scenario 1: User enters library and interacts with Lexi

In an attempt to solve a case at hand, the legal professional uses the VR. In terms of experience, the user would feel in place at a library (the virtual library giving the feeling of a traditional one). On entering, the user could take advantage of the voice assistant feature of the VR, thereby asking the VR (here, Lexi - our virtual library assistant) to return a set of cases that could be relevant to the case at hand based on some filters.

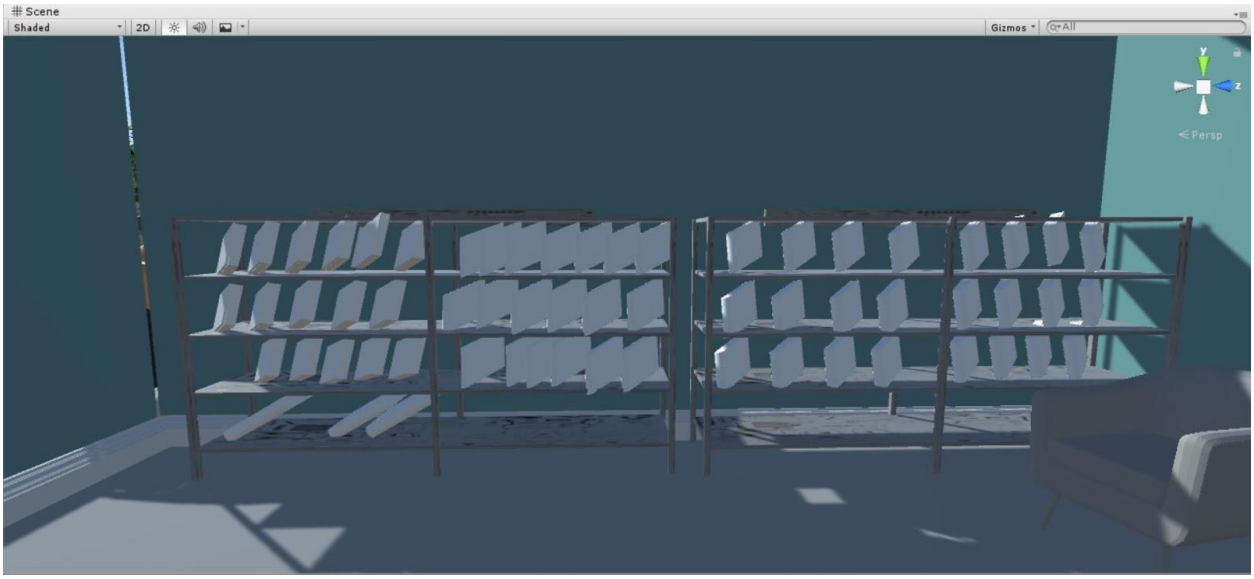
The user here sees a library. This image shows a third person view of the user after wearing the VR headset.



The following image shows Lexi (here, virtual assistant) which is basically a way to take advantage of the voice assistant feature of a VR allowing the user to search for relevant case documents.



The following image shows the view of the entire (virtual)library as viewed by the user.

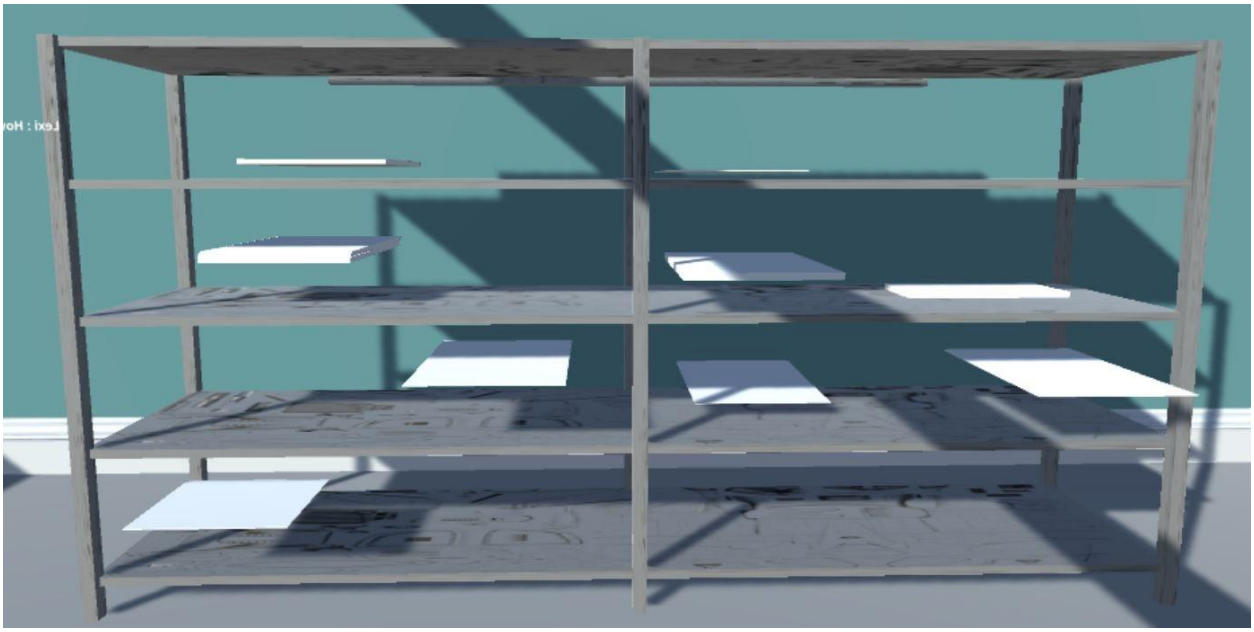


Scenario 2:Based on user chosen filters, the user then enters the mini reading room with the selected relevant documents

The mini reading room here would essentially serve as the user's own virtual library. The mini room as shown here would look exactly the same as a traditional library.

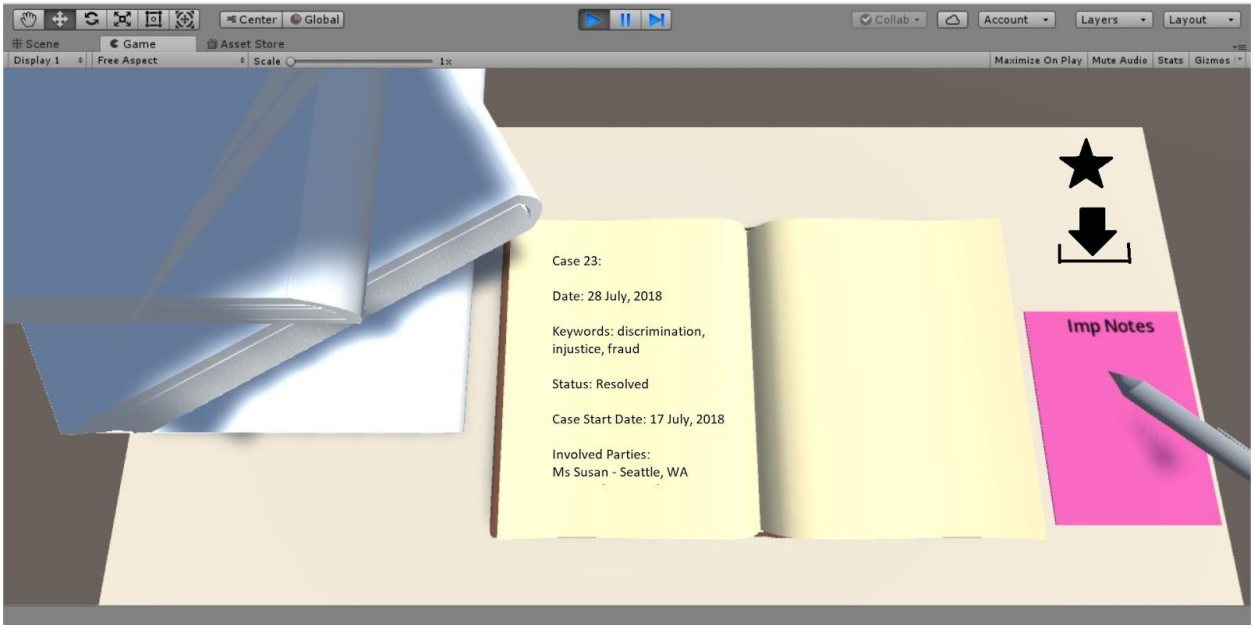
The following image is a depiction of how the user will see a list of relevant documents by entering the mini library room (virtual).

The following image shows the set of relevant documents as arranged in the mini library generated for this case.

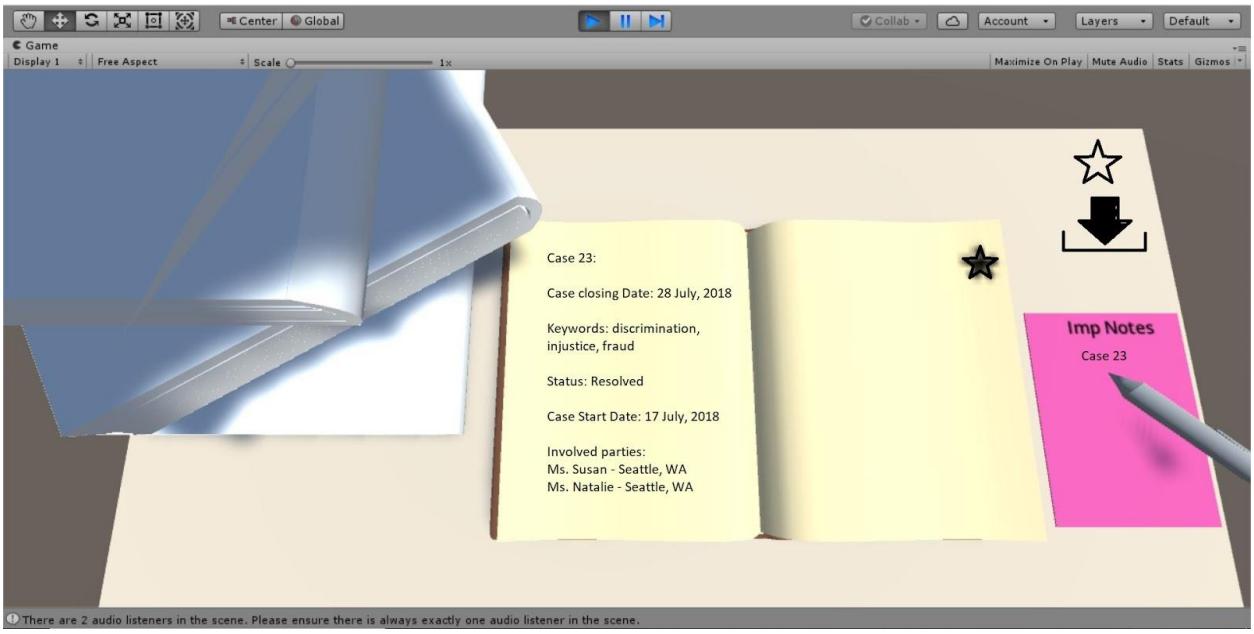


Scenario 3: With the documents in the mini reading room, the user can perform the functionalities as depicted in the images below

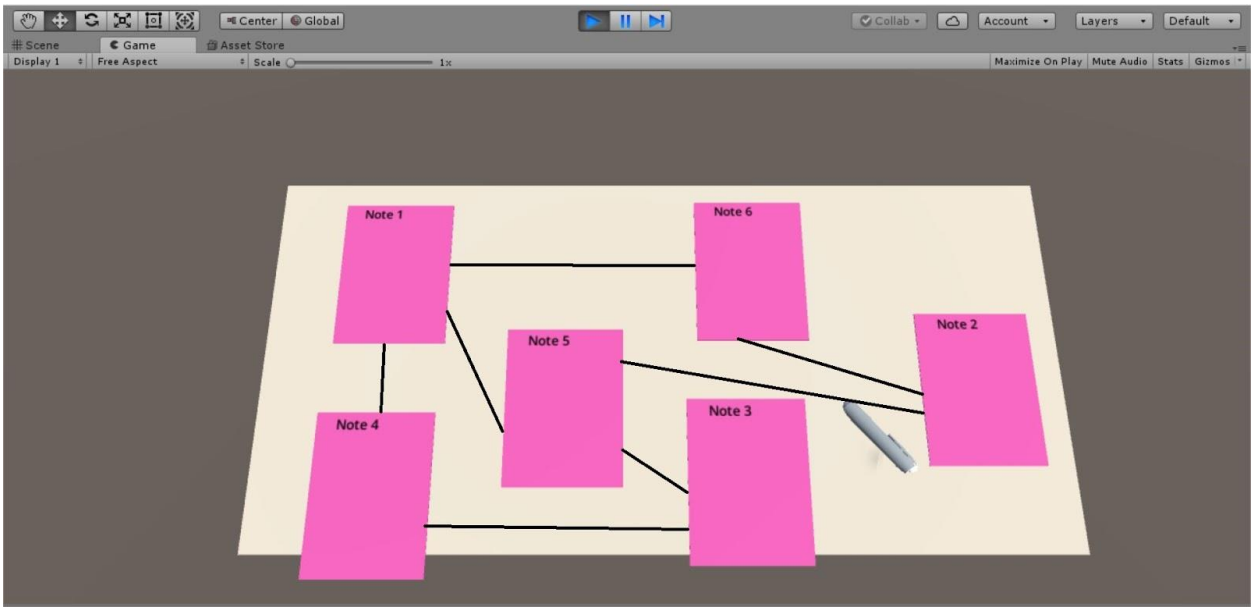
The following image shows a document viewed in full view by the user consisting of options of saving and starring the documents.



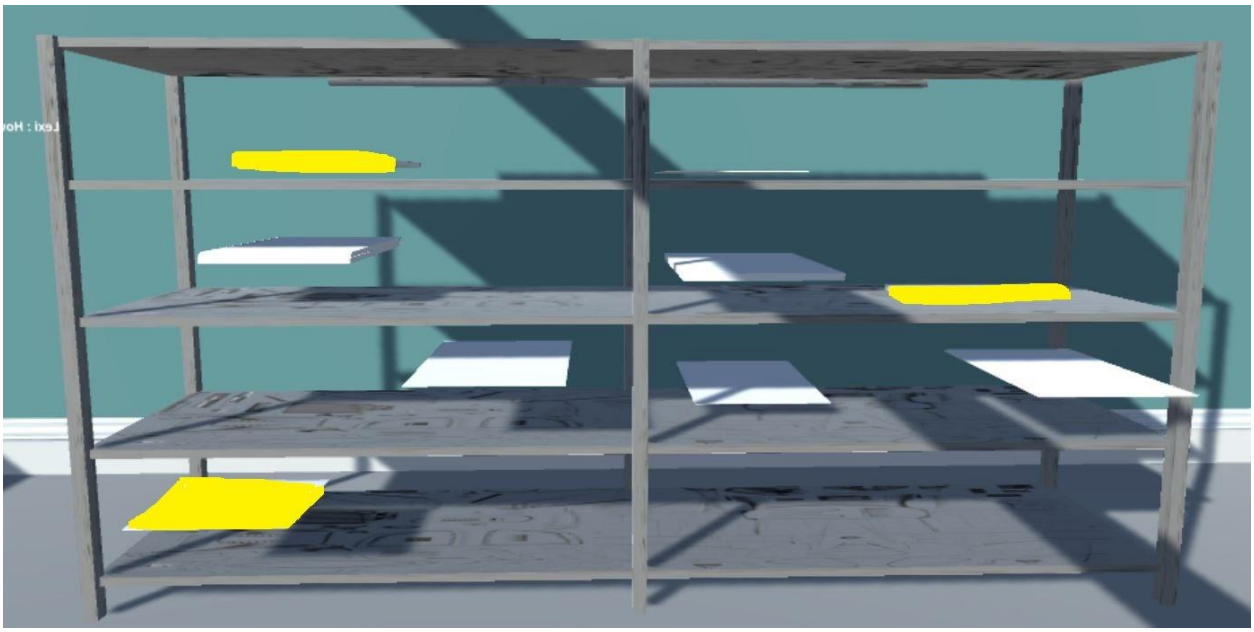
The following image shows the visual of a starred document. Starred documents are different in color as compared to normal documents to tell them apart and identify their importance.



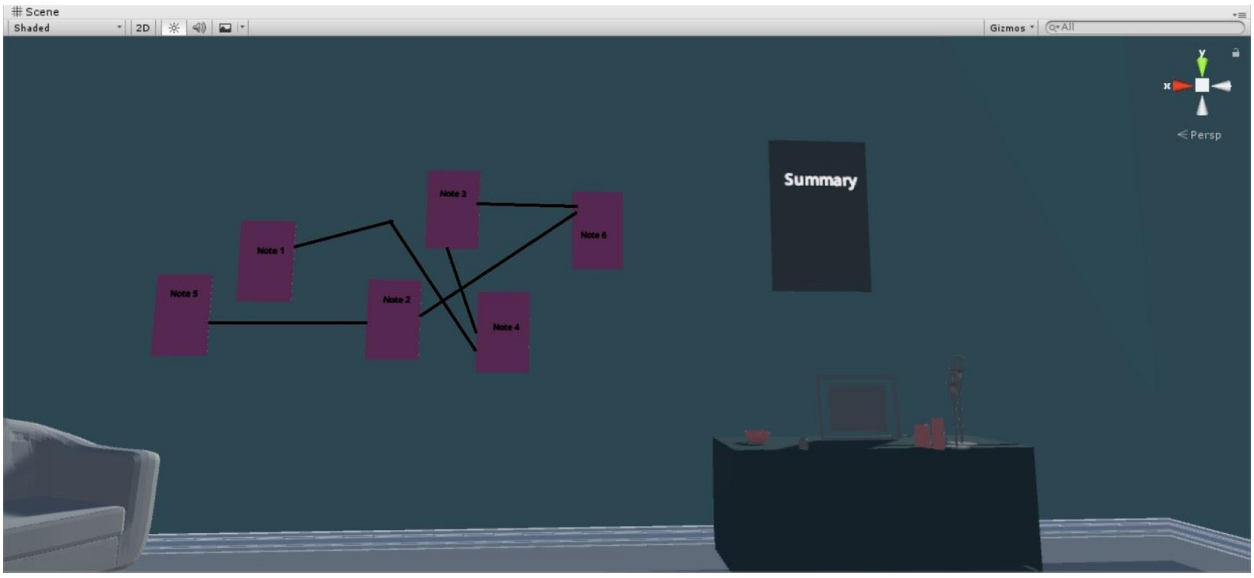
The following image shows the note map as created by the legal professional .



The following image shows the visual of the users mini library consisting of all starred documents. Starred documents are shown in yellow color.



The following image shows the lexi notes wall and a summary notes generated using text summarization after the user has created a mapping of the sticky notes.



Trial:

- The first run of our application was in third person view. We realized later that a first-person view would be more applicable in our case to depict the user's actual experience.
- We could not have first-hand experience of using a VR headset so all we could do was watch videos and try to imagine and build our prototype.
- One of the other issues we had was setting up the environment in 3D and managing the colors and trying to analyze a 3D view.
- Another issue which was making was of sunlight. We were confused as to where to place the directional light.