

# CS 550 Final Project Proposal

Project:

Solar System and Interstellar Space with moving Interstellar Objects

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I have created a solar system as my final project and this report will be consisting of the following parts:

Project proposal, My Achievements and My Shortcomings, and Screenshots

### **Project Proposal**

In this final project, I am planning to implement a solar system in a crystal ball with several other features.

I will be trying to make an active revolving solar system with asteroid belt and other interstellar space objects and asteroids (kind of like “[Oumuamua asteroid from 2017](#)”).

Link for more information on Oumuamua Asteroid:

<https://en.wikipedia.org/wiki/%CA%BBOumuamua>

Although I have experience using texture mapping and lighting, creating an oval trajectory for the interstellar asteroid will be a challenge for me. I'll be attaching a picture from Wikipedia in the end to show what kind of a trajectory I will try to achieve.

For the requirement of views, I will set the key binds in a way, which will make the user navigate in the scenario using certain keys and all other movements using the mouse will be like what we did in previous projects. The inside view will consist of our solar system while the outside view will have interstellar space and other galaxies (it will be a challenge but I'm optimistic about it!)

I would also put some easter eggs in the view which will be fun to point out and fun to follow in the environment! (kind of like blackhole and galaxies mixing and colliding)

All the above described will be implemented and hopefully the desired outcome will be produced. I'm very optimistic about this project.

## **Achivements & Shortcomings**

I was able to create almost everything my from my project proposal idea. I made a solar system with an interstellar object orbiting from a different orbit and multiple galaxies from outside view.

For the inside view, I created the solar system with planets and there orbits where there was a interstellar object added in a different orbit than the other planets. Due to being a challenge initially, I wanted to make the orbit of interstellar object “OMUAMUA” elliptical in nature. This was quite a challenge for me and after spending a lot of time on it I figured out I wasn’t able to pull it off. But instead, I managed to put it in an circular orbit at a slower speed than other planets in the system.

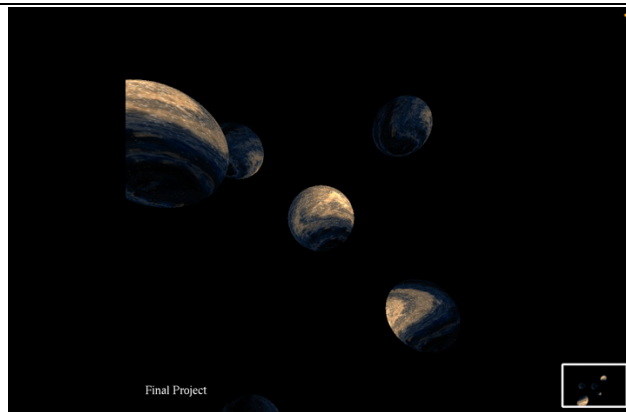
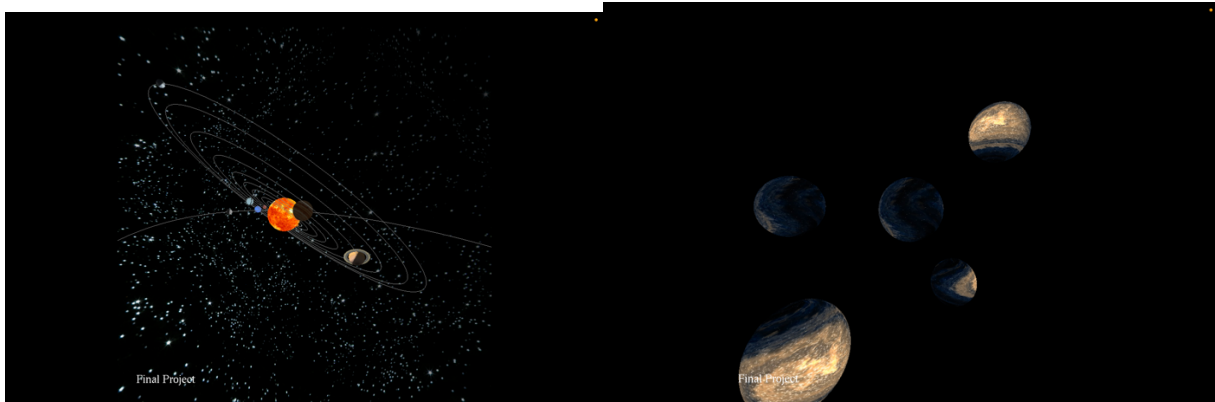
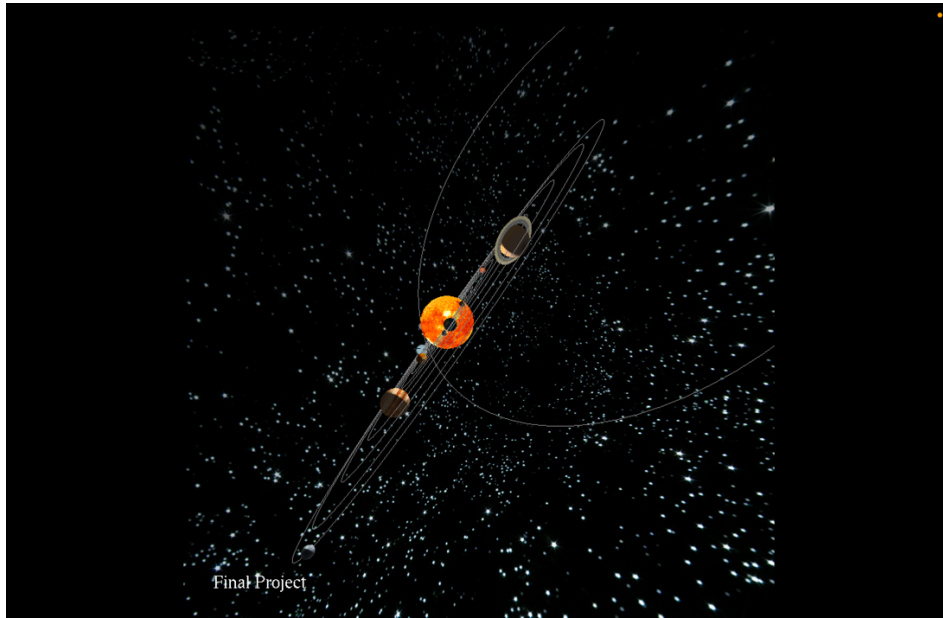
I assigned “W”, “A”, “S”, “D”, as the keys to navigate in the inside view for zoom in, zoom out, move left, and move right respectively.

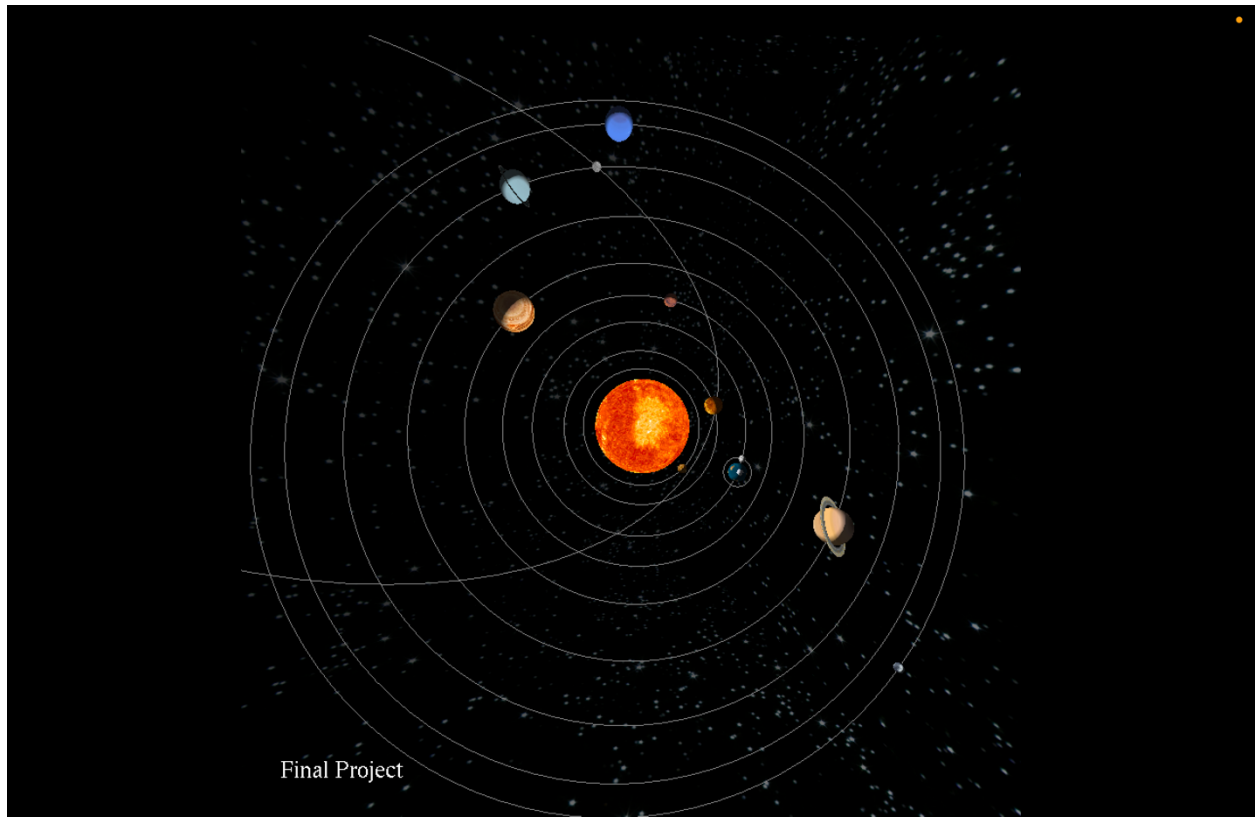
For the outside view I have created multiple galaxies that were **Distorted** to look real in nature. Although I was planning to make them collide, due to infancy of my skills in graphics I couldn’t achieve that part.

## **What you learned from doing this project**

This project taught me a lot. The texture mapping is the first thing. This project had a ton of textures, so I got a good workout from it. On the Sun and the remaining nine planets, I used textures. The outside view galaxies also have a distorted texture. Moreover, I also added a starry background to my inside view

Some images that are especially representative of what you did





**LINK:**

[https://media.oregonstate.edu/media/t/1\\_vos83h8i](https://media.oregonstate.edu/media/t/1_vos83h8i)