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CMST 315

Project 3 Reflection

Question 1 What issues or challenges did you face completing this project?

The changes from the last project to this one are the largest so far. I had a great time coming up with ways for the game to operate like I want. The biggest challenge for me in this project was raycasting. The idea for raycasting came about when I was trying to create a “reticle” that would show where the ship would be shooting. My initial idea for the reticle would be to place it further down the z axis from the ship and move it using the a,s,d,w keys. After making it work, I soon found that this was not a good idea for several reasons including difficulty playing. I then decided that I would cast a ray from the ship to the location of the mouse. I learned all of the mechanics from the Unity Tutorial “Let's Try: Shooting with Raycasts”. I found that it was easy to extend the concepts to my game. I then added a laser mechanism to my ship using the LineRenderer component that was also explained in the tutorial. One thing I may do before the final submission is change from a laser to a rocket. I just find that the laser isn’t as satisfying as I want. I made several more changes throughout this project that each had their individual challenges. Swapping the primitives for finalized assets was not a big issue as I just followed the directions of the tutorial. I also wanted my ship to “look at” the reticle and I conveniently found a LookAt() method to complete it. However, I found that as the ship looked and moved along the x and y axis, it would nudge down the z axis even if it was frozen in the game object options. To fix this, I just had a z axis check in the update() method to keep it bound.

The next changes include (but not limited to):

* including music and sounds
* increasing difficulty with time
* explosions on impacts
* particles behind the ship
* switching from laser to rockets

Question 2 What software programs did you use to create this project?

For this project, I used all of the previous programs as last time. Rider as my IDE and Unity Editor for changing other game aspects.