

## **Asteroids Defense**

During the creation of the prototype of Asteroids Defense, I have focused on the visual side of development so I can display my ideas in more detail. I utilized assets, particle systems, and post-processing to create a more modern take on a classic-inspired game. In this version, I used a particle system to create stars twinkling and slowly moving. I adjusted the particles to only be created on the edge of its radius, like a skybox. This early iteration of the game can give a glimpse into the aesthetic direction I plan on taking.

Throughout this project, the greatest obstacle to overcome was my lack of coding knowledge. Implementing efficiently written scripts was not something that could be fit directly into this iteration of the game. As development continues, my understanding of the framework I have built will get better and I will be able expand on the current game mechanics, simplify inefficient code, and create more appealing visuals.

The process that I took was simple and straightforward: Get as much working as I can with my current knowledge and create a basic prototype that displays integral game mechanics. Something I would've liked to implement but could not get fully functioning for this prototype was an explosion particle system that is triggered by asteroid collisions on both the projectile (laser) as well as the environment surface. The easy part was creating the particle system, but the problem arose when I tried to instantiate the particle system prefab on the asteroid when it collided with the projectile. Because I had already created a script to destroy the asteroid on collision, applying the explosion script did not work because before the explosion could instantiate, the

asteroid was already destroyed. Another mechanic I didn't have time to implement was difficulty increase as the player progresses.

Overall, I am happy with the current state of the prototype. It leaves me with a lot of room to expand on for future updates and acts as a great visual baseline for where I plan on heading with it.