

**Team No. 11**

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**Project Name**

Frontier Unknown

**Project Synopsis**

A medium sized multiplayer 3D spacecraft shooter game focusing on utilizing high quality graphics and ray tracing technology built with the unity engine.

**Project Description**

- Why is the project being undertaken?

Our intentions for this project are to gain experience working with the Unity Engine in-depth and develop a professional-level product. Further, we aim to have loads of fun, while creating a polished game that could end up on the marketplace in order to pass that fun on to others.

- Describe an opportunity or problem that the project is to address

We seek to address the cabin fever produced from people being locked up without social interaction due to Covid-19. We will also expand the co-operative/competitive ship battle genre established by games like Guns of Icarus with new mechanics and features and unique setting. Further, we will bring new graphics technology to the genre through the use of DirectX 12 RTX raytracing.

- What will be the end result of the project?

We will produce a medium scale, team-based multiplayer game that encourages effective cooperation and large scale tactics in a space combat environment. Ideally, this will be a professional-level game that could potentially be sold for a profit or released online for free.

**Project Milestones**

First semester:

1. Use-Case and UML diagrams completed (10/26)
2. Networking choice and online multiplayer establishment (11/4)
3. Gameplay logic and fundamentals (11/23)
4. Physics and collisions (12/11)

Second semester:

5. Prototype models completed (2/28)
6. Shader and raytracing implemented (3/15)
7. Models & SFX Integration (4/15)
8. Full gameplay completed (5/1)
9. Presentation and final documentation completed (5/14)

Gantt Chart included in the submission.

## **Project Budget**

- Hardware, software, and/or computing resources
  - Unity 2019.4.10f1 LTS (free)
  - Perforce's Helix Core (free tier, may upgrade)
  - Unity assets (tbd, depending on amount of time for asset development)
- Estimated cost: \$200-400
- Vendor: Unity Asset Store, Parforce
- Special training: Unity, DOTS, network coding
- When they will be required: Spring semester