# *Moirai's Trial*

## Tech Feasibility Report

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# 1 Summary

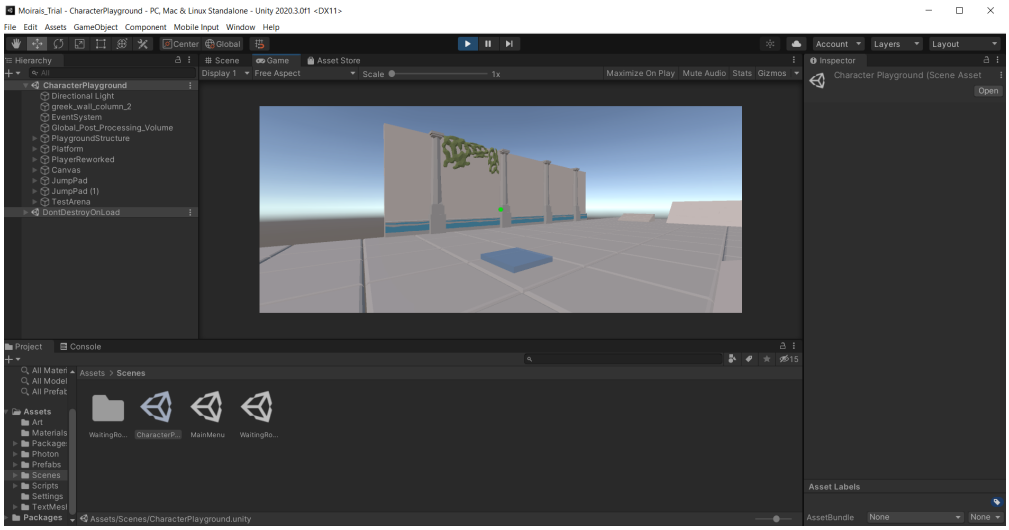
This report serves a succinct explanation of the major technologies that will allow for the development of the game **Moirai's Trial**. This report will go over the *Game Engine*, *Multiplayer Framework* and deployment options for this game.

# 2 Technologies

## 2.1 Unity

In terms of game engine, **Moirai's Trial** will be developed in **Unity 3D** using version *2020.3.0f1*. This engine was chosen for three main reasons. First, and foremost, is the fact that this is a free piece of software. Secondly, everyone in the programming development team has already had a fair share of experience using this engine and as such, this will ease the implementation. Thirdly, there was already a code-base and small prototype implementation of the multiplayer matchmaking created by one of the team members using this version.

Additionally, **Unity 3D** also possesses an active and expansive community of tutorials and resources - of which 3D Models are the most notable and important for this project as we do not possess any 3D Artists.




The Unity3D editor with a character movement prototype playground scene running

## 2.2 Photon PUN

**Photon PUN 2** - https://www.photonengine.com/en-US/PUN - is a tightly integrated multiplayer framework for **Unity 3D**. It lays the foundation and allows for the quick and seamless integration of multiplayer matchmaking providing a simple, yet powerful and expansive networking backend API. Furthermore, this framework has a free plan which allows for up to 20 players to be connected at the same time. It also has a feature called **Photon Voice 2** that will provide us with our very much needed Proximity Voice Chat.

# 3 Deployment

With **Photon PUN**, the team will not have to worry about server hosting as this is all handled automatically by the framework. As such, the only deployment that the team will have to be concerned with is in which platform will the game be hosted and available for download. For this, **itch.io** was chosen, both due to project requirements, but also due to it being the *de-facto* indie marketplace. The game's page has already been created and is available at https://fenixds.itch.io/moirais-trial.