ARCHIMEDES' MAZE

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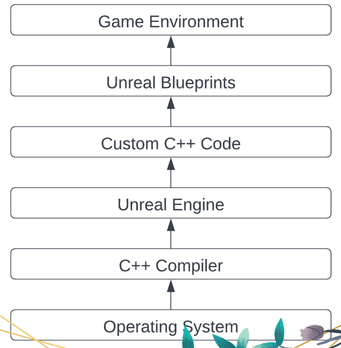
Github Page

Project Description

I have always had a passion for gaming and everything that goes into developing a game. With this in mind I've decided to base my final year project on developing a game using the Unreal Engine 4. The goal of this project is to develop the groundwork on which a full game can be created with reusable functions and classes .



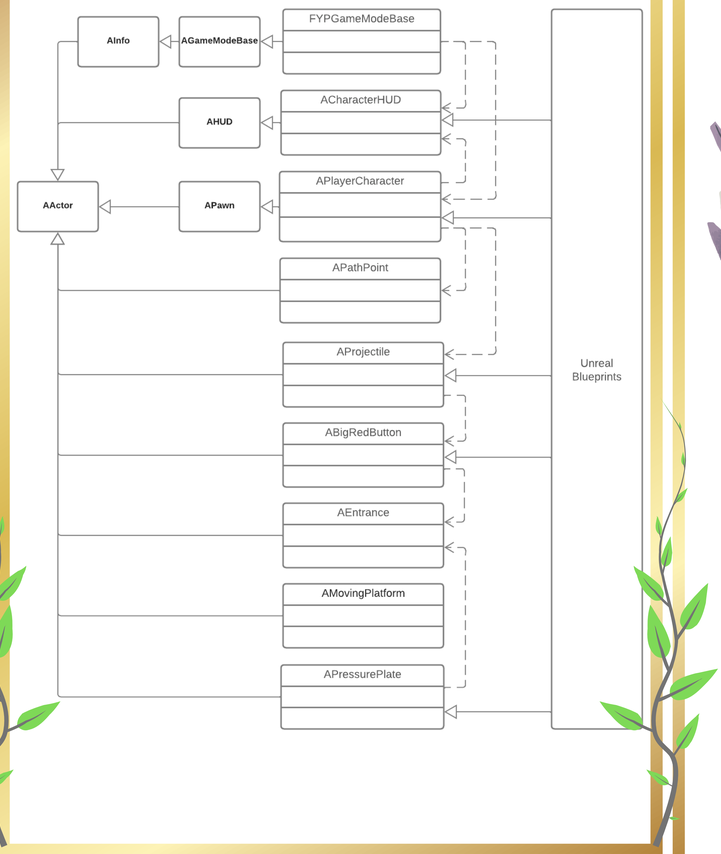
Software & Languages

Throughout development I used many different tools and software to develop this project.
For project planning I used Jira to develop a timeline of features that need to be delivered. This worked alongside Git which handled version control and held the code repository.
The project itself was built around the unreal engine, which acted as a framework for the project and provided a 3D editor for the game environment. I also used blender to develop some of my own custom assets for the game.
And finally C++ was used extensively to implement features into the game.

Unreal Engine

A game engine is basically a software framework specialised in creating video games which include libraries and tools relevant for this purpose along with a 3D editor to place assets into the game world.
The reason I decided on using the unreal engine for my project was that it's based on C++. This allows developers to work more closely with the hardware that the game's running on, and allows you to manage aspects such as memory much more closely.
I also wanted to learn more about developing software using modern C++ and the unreal engine gives plenty of opportunity to delve deeper into this with its extensive use of classes and object orientated coding style.

Class Diagram



Conclusion & Results

In conclusion, I've developed a solid base from which I could develop a full game out of. I've added many features which I can reuse throughout developing a full game out this project.
The result of this project is an environment the player can interact with and explore. There's full player input and a projectile system. I've also added in a main menu and a pause screen which allows the player to save and load the game, and there are several components I've created which the player can interact with.