Momentanium

### Exploring Platformer Fighting Game Mechanics

### Final Year Games Programming Project Proposal

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##### **Project Description**

The aim of this project is to explore the various mechanics found in platformer fighting games and use them to create my own fighting game that people can play. Furthermore, I plan to implement new mechanics, including movement being more momentum based and a unique health system, and use playtesting to explore how they affect the user experience of my fighting game.

The project will be programmed in GameMaker Studio 2 using GML, as it contains tools that are very useful for developing 2D video games, and is an engine that I am comfortable working with due to my previous experiences with it.

##### **Rationale for project choice**

There are a few reasons as to why I went for this project. Firstly, platformer fighting games is a genre that I have a large interest in, having played *Super Smash Brothers Brawl*, *Super Smash Brothers Ultimate*, and *Brawlhalla*. Therefore, I feel confident in my current understanding of the base structure of fighting games to be able to develop my own fighting game, as well as explore the more complex mechanics of the genre.

Secondly, artificial intelligence programming is an area that I am interested in, and from my current understanding I know that fighting game AI is relatively complex, so this project will allow me to research into this area and possibly create my own AI for the fighting game.

Finally, platformer fighting games are often 2D or 2.5D, and I have experience with creating pixel art for various other projects I take part in. Therefore, developing a 2D fighting game would mean I could create my own assets, which will in turn prevent any possible legal issues that would have arisen if I were to use assets made by other people.

##### **Areas for investigation**

There are 3 main focuses that this project will investigate to help develop a good understanding of how fighting games are developed.

*Developing the Structure of a Platformer Fighting Game*

This includes various mechanics that fighting games are based on, such as the moveset, movement and health of a player. This is necessary to be able to implement new mechanics and properly test them, and it will also include a game loop to allow for proper playtesting.

*Implementing and Testing Unique Game Mechanics*

This is to experiment with the mechanics commonly found in the fighting game genre and see how changing them impacts the user experience of the game, as I believe it will help me develop a better understanding of these mechanics and their purpose.

*Developing a Platformer Fighting Game AI*

This is to both develop my understanding of AI and my understanding of how players use the mechanics a fighting game provides. This will also prove to be helpful for playtesting, as those who cannot play against others in local multiplayer will be able to test the game by fighting the AI.

##### **Background research for proposal**

##### **literature review**

##### **Methodology for development and/or research**

##### **research ethics and legal issues**

##### **project plan**

##### **Proposed project artefact**