**Student Name:** James Jamieson

**Programme:** BSc GP **Project Type:** Development project

**Title:** Development of a tile-based shop management game.

**Outline:** This project will be focused on developing a tile-based shop management game using the Unity Engine. The final vision of the game includes the player hiring employees as well as building and laying out a shop.

Artificial intelligence is an essential part of the game and will be the main focus throughout the development. AI is so important because the player will not have direct control over their employees, or their customers, and therefore a good AI system is needed to keep the game realistic and the NPCs will be required to make correct decisions. The employees will need to decide what jobs to do, and the customers will need to find items, and decide whether to buy them.

Due to the importance of AI, this game is going to realistic and will be a very good simulation of a real-world shop environment. Because of this, my game can be altered to be a shop simulator which can be used for educational purposes in the retail world. I will keep referencing this idea throughout, as my game will have two purposes; one to be entertaining, and also to have the potential to be educational.

Throughout the project, vast amounts of research will be done on AI, pathfinding, and decision making in games; as well as, research on the best ways to program games using Unity.

**Proposed supervisors in order of preference:**

1. Alain Simons
2. Simant Prakoonwit
3. Leigh McLoughlin