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|  | **Rochester Institute of Technology**  **Golisano College of Computing and Information Sciences**  **School of Interactive Games and Media**  **2145 Golisano Hall – (585) 475-7680** |  |

**Data Structures & Algorithms for Games & Simulation II**

**IGME 309, 2015 Spring**

**Final Project Definition**

**Due: Sunday April 10th (11:59pm)**

**Project: Zombie Rift**

**Team: CSH**

**Repository Address: https://github.com/mikeplynch/ZombieRift**

**Members: (Last names SORTED in alphabetical order)**

**Cohen, Tal**

**Lynch, Michael**

**McGraw, Jackie**

**McInerny, Aidan**

**Project Description:**

***The technology:***The proposed idea is to create a game engine that utilizes OpenGL 3.x 7 beyond in conjunction with an Oculus Rift headset to create a virtual reality game. This will utilize the SDK and API for the Oculus and be written in C++.  
Information on the Oculus developer tools can be found here: <https://developer.oculus.com/>   
We will not be utilizing ReEngine. We will also be using an Xbox game controller (XBOne/360, tbd) for player controls.

***The Game:***The game we will be creating will be a horror simulator that puts the player at the center of a playing field. The scene will be dimly lit and zombies will come towards the player. The player must rotate around in the center, using the controller for movement and moving their head with the Oculus headset, and prevent the zombies from reaching them. The player will be equipped with a gun to defend themselves against the approaching zombies.

**Project objective:**

This game and engine should satisfy all of the requirements for this project. The zombies will utilize collision detection and resolution to avoid walking into each other and occupying the same space. Additionally the bullets colliding with a zombie will be handled using this same system. Optimization will be implemented, with what kind to be decided in the near future.

**Milestone 1 objective:**

By the end of milestone 1 we wish to have our project completely laid out with milestones. Our engine will have begun development. We do not expect to have a working prototype done at this point as we will be writing our own engine. Oculus support should be functional at this time.