**University of York**

**Department of Computer Science**

**SEPR - Assessment 2**

# *Implementation Report*

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Assessment 2 required us, Team Craig, to implement the following features within our game: two types of players, three types of power ups, three locations and a winning condition. Before implementation began the team discussed which of our game ideas, elicited during Assessment 1, should be implemented for this part of the assessment in order to meet the requirements of the customer. A link to our Requirement Specification can be found at the bottom of this page.

The first requirement for this part of the section was to implement two types of characters. Within our game, we have implemented the character types Whizz and Brick. As can be inferred from their appropriate names, Whizz has a boosted speed attribute whereas Brick has a boosted health attribute. These different attributes change the way each character interacts with enemies, for example, the Zombies (**REQ ID: F5 - P**). Whizz has increased speed so is able to more easily avoid Zombie attacks whereas Brick has increased health so is able to sustain more damage before being killed (ending the game). Although, zombies and combat have not been implemented as this was not required for Assessment 2. Both these character types as of now have the same weaponry and have access to the same powerups, but this may change as our game progresses or a more concrete storyline develops. Differences in these attributes should enable players to make educated choices on their character selections depending on their playstyles or preferences. As of this version of the game, characters are selected from a drop-down box in the game's menu before the character is loaded into the world map. This was implemented in this way for simplicity and because current characters only differ by one attribute. However, as more character types are added, a separate character screen will be implemented to enable players to have access to greater information on each character's weapons, attributes, appearance etc. The selection of either character has no impact on whether the player can progress through the game. All locations can still be visited with both characters and a winning state achieved.

Another required feature which needed to be implemented for this section of assessment was three powerups. For these, we decided to implement a health pack, a coffee and rapid fire **(REQ ID: F3 - P).** As expected, when a character walks over a health pack the character's health regenerates by a unit of 10. The coffee cups boost a character's speed for twenty seconds and the rapid-fire increase fire rate for twenty seconds. The locations of these powerups packs are spread randomly across the map. However, the plan is to enable players to purchase these powerups from the 'Nisa' on the world map using virtual currency they collect whilst exploring. As neither the 'Nisa' location nor the 'virtual currency' system have been implemented yet this requirement has not been met as of now **(REQ ID: F12).** Despite this, all three of the powerups are functional for the two characters types implemented.

As required for this section of the assessment three locations have been implemented of the six required for the final version of the game **(REQ ID: F4 - P).** These are as follows: Ron Cooke Hub, Computer Science department and Goodricke College. These locations were chosen in particular as they are located next to each other within the world map system allowing players to navigate between each location without discontinuities in their journey **(REQ ID: F9).** So, for this assessment only partial implementation of the world map was needed, saving time by minimising the implementation of additional features such as 'spending virtual currency' or the 'mini-game' **(REQ: F12/F2).** Furthermore, to avoid spending time implementing unnecessary features a change to our winning state was made. The original design for the winning state was to defeat both bosses and visit all locations. However, for this version of the game a winning state is achieved by visiting all three locations **(REQ ID: F7)** as the implementation of the bosses was not required by the customer. Players must collect keys at each location. On the collection of each key a new part of the map will be unlocked allowing further keys to be discovered. Once all keys are collected, they can be used to unlock the golden lock found somewhere on the map, ending the game.

Despite this, additional game features have been included to improve the game's user interface and intuitiveness **(REQ ID: U1).** For example, a game menu has been included at the start of the game where character selection takes place and the loading of the world maps can be initialised. This was included in order for this version of the game to be a functioning game in its own right. Through creating the game menu, we were also able to implement the system for switching screens between menu's, world map and potential ending scenes, enabling a progression through the game although, as of now, without much of a narrative.

Requirement Specification: https://teamcraigzombie.github.io/assets/downloads/UpdatedReq.pdf

**NOTE: (REQ ID: XY – P)** = Partial Implementation of full brief requirement but associated requirement for Assessment 2 met.