Implementation

For the second milestone of this project, the features required to be designed and implemented were as follows; all the character types, the world map, combat mode, and at least five locations. We believe that we have achieved all these requirements to an acceptable standard, as explained below. Links to the requirements specification *(see 'Requirements Specification' document)* are shown in brackets with the relevant requirement id.

The first required feature is that all the character types are implemented, which we believe has been achieved to a sufficient standard. There are six characters fully animated and functional (req 2.04), and each one has a unique weapon with different damages and attack speeds (req 2.05). There is the possibility of extending the characters by adding special abilities to make each one more unique. These abilities could include different powers or attacks, but the game is able to run effectively without these and provide an enjoyable user experience. We have also created a character switching screen that allows the changing of characters, which enables access to all of the weapons. Each of the ranged weapons has an associated "energy cost" which varies how the classes perform when reducing the ammunition bar. To support our storyline, at the start of the game, five of the characters are 'locked', meaning the user cannot play as them, but as they progress through the game characters are unlocked and made available to play as.

The second required feature is the world map (req 2.06, 2.01), which we have designed and implemented to fit our theme and accommodate the current levels available. The world map shows the university campus, with buttons for all the levels, even those that have not yet been implemented, and labels for the current working levels. When a button is clicked a loading screen is shown while the corresponding level is prepared and opened, ready for the user to play. To assist in the storyline and progression of the game, not all the levels will be playable, or 'unlocked', to begin with. As the user progresses through the game by completing the available levels, more will be unlocked. During the next stage, the new levels that are designed and implemented will need to be linked to the map and once completed, make the next level unlocked.

Another required feature is the combat mode (req 2.07), which we have implemented to, what we believe to be, an acceptable level. Currently, health bars are visible for both the character and the enemy, which deplete during the battle as attacks are exchanged. There is also an ammunition bar shown that depletes when ranged attacks are used and replenishes when close combat attacks are performed. This encourages the user to used a variety of attacks, not just those that are long range.

The full controls for combat mode are described in the user manual (see 'user manual'). The current combat mode in place could be further developed to increase the user's experience through refinement, increasing the variety of attacks available to the characters and enemies, and allowing upgrades to weapons.

The final feature that required implementation is the five locations on campus (req 2.10), which we have been able to design and implement to a suitable standard. The five completed locations consist of the Ron Cooke Hub, TFTV, Engineering, Computer Science and a tutorial level. The remaining levels are located in Art, Chemistry, Biology, the Vice Chancellors office and Nisa. The current locations in place provide a baseline for the content of each level, which can be built upon by, for example, adding currency and other items to be collected, and including text that guides the user through the level and assists in the storytelling. The tutorial level must include some sort of text to explain the movement and combat controls to the user, which is currently not in place.