Damien Henderson GEC Milestone 4

# Milestone 5

## Date

Week 10

## Functionality

I will have animation working with clipping to the screen

## Tests

To test that this functionality works I will:

* Render 100 sprites at different frames of animation on different parts of the screen
* Render animated sprites which are partially off screen to see if clipping still works on animated sprites

# Milestone 6

## Date

Week 11

## Functionality

I will have a World class which will handle the game logic and which will store all entities in the game.

I will also implement a fixed update interval system so the game runs the same on any computer regardless of hardware specifications

## Tests

To test that this functionality works I will:

* Create a lot of entities and have them update their positions each update to test that the update loop works
* Run the game on a computer then artificially slow down the running of the program to see if the game still runs the same

# Milestone 7

## Date

Week 12

## Functionality

I will have a system to render a tile map efficiently with culling of off screen tiles

## Tests

To test that this functionality works I will:

* Render a high number of tiles some of which are off screen and see if the performance is still acceptable
* Render a lot of tiles all of which are off screen and compare that performance to the performance when not rendering any tiles

# Milestone 8

## Date

Week 13

## Functionality

I will have a Camera class which will allow the player to view different areas of the map

## Tests

To test that this functionality works I will:

* Move the camera around the game world and make sure the rendering is done correctly with only the sprites and tiles which are fully or partially inside the camera’s view being drawn to the screen
* Check that the camera is properly constrained within the bounds of the current level

# Milestone 9

## Date

Week 14

## Functionality

I will have the ability to load an entire level from an xml file

## Tests

To test that this functionality works I will:

* Test multiple level files to see if the level displayed on screen changes when the level being loaded changes
* Test a file which is missing certain types of tags to see if it is still loaded correctly

# Milestone 10

## Date

Week 15

## Functionality

I will have a way for the player to select and control their units and then have the units find their way to the selected destination correctly using an algorithm such as A\*

## Tests

To test that this functionality works I will:

* Try clicking on different units and then click on locations on the map to see if the units find their way there correctly
* Try clicking on an unreachable area of the map to see if the route finding realises that the location is unreachable in a sensible timeframe

# Milestone 11

## Date

Week 16

## Functionality

I will have an AI for units which will attack any nearby units on an opposing team automatically and which can in the case of the player’s units attack an enemy which is selected by the player

## Tests

To test that this functionality works I will:

* Move a number of units on opposing teams within attack range of each other and check that they only attack units on opposing teams and not units on their own
* Repeat the above scenario with the player units having targets selected for them by the player

# Milestone 12

## Date

Week 17

## Functionality

I will have an AI enemy which can play against the player and I will have win and lose conditions

## Tests

To test that this functionality works I will:

* Play several games against the AI and each time either win or lose intentionally
* Play two AI players against each other just to see what happens