

## **TestPathing & TestPathingEnd (in GarySheppardM4Tests)**

TestPathing is meant to test the functionality of the ArrayList of Point2D objects changing. Since entity movement relies on this ArrayList with the remove method, the logic here is that the entity will always have a vector to move to so long as the next Point2D vector is not null. This test ensures there are no null spaces for entities to move to.

TestPathingEnd is meant to test the functionality of the program doing something when an entity has no other place to move in its path. Since all entity paths stop at some point, the logic here is that when this path ends, the program will do the next thing specified. This test ensures that the next functionality can occur when an entity ends its path.

## **TestMonumentDamaged**

This file will include 2 tests: Firstly, a test to ensure that the monument loses health when it is attacked, and secondly, a test to ensure that the game over screen is activated (ie: the program recognizes the tower has been destroyed) when the monument health is 0.

## **TestStartGame**

The first test will check if the game begins when the start game button is clicked on. This is important to the functionality as it determines whether the game properly starts or not.

The second test will check if the game restarts properly or not. After the monument health is set to zero and the game over screen is showing, the test will check if the player goes to the welcome menu screen when they click on restart game.

## **TestExitandSpawn**

The first test will check to see if the application closes when you select “No” on the game over screen. This is important in checking the functionality of the game over screen.

The second test will check to make sure that the enemies are spawned on the path when the game is started.

## **TestPlayerCombat**

The first test checks if the enemy attack functionality works well - that is, the monument decreases when the enemies reach the monument. It compares the current health value and the expected health value.

The second test checks if the enemy spawning works correctly and if the combat starts only when the player clicks the Start Game button. It compares the values of isStarted variable with the expected boolean values.