2.5 | Testing

In general, software testing illuminates the level of quality, usability and client requirement-fulfillment a software has. To test our video game we used QA testing, the video game industries standard model.

The process works as follows:

Feature tested → testing report → feature change → testing report → repeat

This is done not only to search for bugs but also to look at aspects such as game feel etc. however this report will focus on bug detection via QA.

Using QA for testing bugs: The problem with using just code focussed tests on video games is that "correct" test results do not actually mean the game is behaving as intended, nor do they provide the key benefit of QA: the trace.

The Trace is the set of circumstances that led to the bug. This is allows the bug to be replicated and then have elements of the sequence changed until the exact steps that cause the bug have been found. Once this is done the cause of the bug is much easier to find and fix. And once a bug has been changed in code the sequence can be repeated to see if the bug is fixed or not.

Here are some examples of Bugs that were found when we used QA testing on our game:

Bug:	Trace:	Cause	Fix	Pass
Player not being able to enter doors	Player collides with doors and then stops moving, meaning they cannot enter the door	Oncollision only works with moving objects	Use OnTriggerEnter2D instead	yes
Multiple instances of BossTracker	Player cannot enter the 2nd area again after completing the 3rd	A new BossTracker object was being created with default values	Make the original Boss tracker static	yes
Multiple dungeons being generated	The player seems to be in a infinite dungeon	A new dungeon was being generated every time the player entered a room	Make the original dungeon map (Don't Destroy on load) and remove from all other scenes	yes