**Technologies and Testing Tools**

**Technologies:**

**Programming language:** C#

It is a simple, modern, general-purpose, object-oriented programming language developed by Microsoft within its .NET initiative led by Anders Hejlsberg.

**Game Engine:** Unity 3D

Unity is a cross-platform game engine developed by Unity Technologies and used to develop video games for PC, consoles, mobile devices and websites.

**Testing Tools:**

Few common challenges shared by all game developers:

* Supporting multi-player features - especially when players aren’t near each other
* Authenticity challenges - no one wants their saved game or high score ruined
* Accurate social integration
* Holding up to heavy concurrent load
* Consistent performance across all hardware/software combinations your target audience might use

Making sure everything is perfect for launch - launch is everything when it comes to game

The tools are following:

1) [Bug Tracking System](http://testmatick.com/software-testing-glossary/bug-tracking-system/). As often as a [bug](http://testmatick.com/software-testing-glossary/bug/) is detected the tester has to create a “ticket” in some kind of [bug tracking system](http://testmatick.com/software-testing-glossary/bug-tracking-system/). The system is not something definite, as it may be just an excel spreadsheet and a tool for tracking advanced Software Development process, that can be used by any member of the company. The tracking system can be considered as a necessary evil by some testers since logging of [bug](http://testmatick.com/software-testing-glossary/bug/) reports is tedious for bugs.

2) [Test Case](http://testmatick.com/software-testing-glossary/test-case/). Before testing a game, one is recommended to know what you are about to test and how to do that.

3) [Test Suite](http://testmatick.com/software-testing-glossary/test-suite/). It is a set of test cases pieced together to arrive at a specific goal.  This goal has to do with validation of the game’s physic engine, localization (translation of [text](http://testmatick.com/software-testing-glossary/text/) and voice), etc.  As far as small games are concerned, the coverage of [test suite](http://testmatick.com/software-testing-glossary/test-suite/) can be pretty high, spreading over all aspects of the game including the validation of the whole thing.

4) Skills, Experience, and Thoroughness**.** Human’s mind is the most valuable tool to use during video game testing. There is one or another form of a [test suite](http://testmatick.com/software-testing-glossary/test-suite/), test cases and defect tracking system in QA team and they are mostly needed for organization of the work.  How to differentiate between bad and good testers? They are qualified by level of curiosity, investigation, and thoroughness. To become a [dedicated tester](http://testmatick.com/), one needs to use these skills properly, be able to write corresponding test cases, piece together consistent test suites and create 100% clear [bug](http://testmatick.com/software-testing-glossary/bug/) records.

**Links:**

<https://unity3d.com/learn/tutorials/topics/scripting>

<https://unity3d.com/learn/tutorials/modules/beginner/live-training-archive/coding-for-the-absolute-beginner>

<https://unity3d.com/learn/tutorials/modules/beginner/scripting/c-sharp-vs-javascript-syntax>

<http://testmatick.com/game-testing-service-4-most-popular-tools-that-are-used-by-video-game-tester/>

<http://www.undercovertester.com/the-four-most-useful-tools-of-a-video-game-tester>