

# QM Reflection

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## **1. DOCUMENTATION**

During this project we have used documentation to achieve higher quality of our product. As stated in Appendix G – Quality Management Plan (SQAP), section 3, we planned to have 5 documents to ensure a high quality. However, some of these documents were not created and others have been added.

### *SRS document*

The SRS-document was created in the very beginning of the project and used as a base for the user stories and their definition of done. This gave a higher quality for the outcome of the developed functions. For further insight of the requirements and our use cases, please refer to Appendix J – SRS.

### *Backlogs*

For maintaining the backlogs, As said in the SQAP, section 3, the goal for this was for the team to know what was needed to be done during each iteration. This goal was achieved by using Pivotal Tracker. For more information about this tool please refer to the Tools and Techniques section in this document.

### *Test cases*

Before doing the final testing of the game we created test cases so we knew exactly what we expected the outcome of the different test would be. This gave us clear instructions of what result we needed to see in the testing phase for us to be able to sign off on the product as done. For information about our test cases, please refer to the Appendix I – Test cases.

### *SDD*

When we planned the SDD we said that we would expand the class diagram, create white- and black-box diagrams, update the use cases and create scenarios for the user stories we were to develop during the upcoming sprint, before starting to develop. After a few iterations we realised that the structure of the software changed too frequently because of development changes. This made it near to impossible for us to keep the SDD up to date. In order to keep productivity of the development as well as keeping the SDD in shape, we assigned one of our team members responsible for the SDD. This change enabled us to focus on having a well performing, high quality product. For further insight of the design, please refer to the Software Design Document.

### *Bug report*

One document we didn't create until later in the development process and therefore isn't included in the SQAP is the bug-report. When we started testing the developed features we created a document where we could report bugs in order to get an overview of fixes and also get the one who developed the bug to reflect on the issues behind the bugs. This gave us a greater knowledge of our own product and it also gave the team a greater insight of the problems of others, so that mistakes weren't repeated. For further insight in what types of bugs we had, please refer to the Appendix H – Bug Report.

## ***2. TESTING***

Our plan was to have unit, integration and acceptance testing to test our software in order to make sure it's free from bugs and keep a high quality. We have done unit & integration testing on a regular basis throughout the development process in order to ensure that the code that we deliver works as intended and contains as few bugs as possible.

Having the bug tracking document helped us immensely with the testing since we used it to write down the bugs so they were not forgotten and we could later try to solve the bugs without having to try and remember the details and circumstances behind the bugs. For further understanding of our testing strategies, refer to the SQAP, section 4. For information about the result of our test cases, please refer to Appendix I – Test cases and information about our bug tracking can be found in the Appendix H - Bug Report.

## ***3. TOOLS AND TECHNIQUES<sup>1</sup>***

We used a tool called Pivotal Tracker. This tool was used to prioritize the user stories in the backlog and assigning tasks to the members of the team. It proved to be very helpful to us as we could see burn up charts of current iterations, keep track of our velocity and burn down chart for the entire project.

Another tool that we used was GitHub which we used to share and merge our team members code. GitHub had quite a steep learning curve so it was a bit of a challenge to set it up and learn it, but once we got past that hurdle it proved to be very helpful.

We also used google docs as a means to share documentation such as the Timesheet, Bug tracking and meeting logs. We decided to use google docs ahead of dropbox for these uses because these documents needed to be updated quite a lot and some of them at the same time, because of google docs being shared online rather than locally, we can all safely make changes without overwriting someone else's work.

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<sup>1</sup> This section contains information in the Final Report document.

Dropbox was used for documents such as the software design document because it was usually only one person working on them at the same time.

These tools helped us to keep organized and therefore had a positive impact on our quality.

#### ***4. TRAINING***

The plan, as can be seen in the SQAP section 7, we wanted to include research and training in every sprint.

However, this ended up to not be the case. During the first few sprints we had a major focus on research in order to have a vast knowledge base for future iterations where we were to develop. Of course there was some research afterwards but more of a focused pinpointed research for the specific user stories. Furthermore, we have been developing in a trial and error focused way, this have given us an increased knowledge of our code and what to research, giving us a higher quality of our end product.

#### ***5. APPENDIXES***

**5.1. Appendix G – Quality Management Plan**

**5.2. Appendix H – Bug Report**

**5.3. Appendix I – Test cases**

**5.4. Appendix J – SRS**