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| Software Development Team |
| Let’s Quiz |
| Elaboration Phase Status Assessment |

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# Executive Summary

The aim of the construction phase was to take Let’s Quiz from a single core use case to a production ready application ready for beta testing.

Specifically this would mean adding the following to the game:

* Multiplayer functionality
* Social media integration
* Push notifications
* Adding category specific rounds to the game
* Dramatically increasing the scoring and leader boards

We are proud to say we have we have an application that can execute each of these requirements.

# Iteration Evaluation and Reporting

## Iteration 1

The primary goal for this iteration was to get the game to a state where users could play against each other. We knew this would be a large task and that it would primarily have to be completed by a single member of the design team.

The choice to elect a single team member to manage this entire task was essentially due to scaling as it was very difficult to break this task down into smaller pieces. The decision was made for Collin McKeahnie to carry out this task as he felt most comfortable with this part of the project.

By the end of this iteration multiplayer functionality had been added to the game and users could have multiple ongoing games happening at once. The only aspect that was not completed to a production level was in the UI where placeholder art work was used. It was expected that the U would not be at production level by the end of this iteration, the goal was only to have ‘multiplayer functionality’. There were two reason we decided not aim for production level completion of the UI in this iteration. Firstly the time constraints of a single iteration would have made achieving any more very difficult and secondly at this stage it is expected the UI will go through several changes and to save double handling certain aspects of the design it was decided to leave the bulk of the design work until later in the phase.

There was a goal of having offline redundancy added to the game in this iteration. It was decided during the mid-iteration team meeting to drop this as a goal as it was dependent on aspects of multiplayer being functional, specifically a pregame check for opponents and the Game Lobby scene.

Overall this iteration was a success.

## Iteration 2

The goal of iteration 2 was to implement social media sign in, have the game push notifications to users’ phones when it was their turn and to extend the leader boards to have top questions and top question submitters.

It was a mistake to put this as an objective before 'Voting on Questions' was implemented in the UI which according to the Project Plan was not scheduled until iteration 4. The UI for the high score boards were implemented but could be tested by manually adding voting values to the database, dynamically the UI wasn’t able to update as the game did not yet allow for users to vote on questions.

Overall, we did not achieve our goals this iteration.

## Iteration 3

This iteration was deliberately left light for many of the team members as it was foreseen last semester that integrating the different API’s of Facebook, Google Play and Firebase, our push notifications platform, into the game may prove challenging. Our aim for iteration 3 was to finish what was left from iteration 2 which was integrating Google and Facebook and to implement category specific rounds.

This iteration also picked up the offline redundancy which was put on hold from Iteration 1. Now that the multiplayer and game lobby had been fully integrated offline play could be implemented.

Introducing categories proved to be quite tedious. Throughout this entire project we have had various issues moving JSON objects between the database and scenes within the game, however once these issues were resolved categories were added to the game.

## Iteration 4

Iteration 4 had a lot of work added into it, with a few work items passed on from the previous. The main goals being documents, beta testing survey, UAT’s and app publishing.

# Discussion of Risks & Issues

## Server Connection Unavailable

Initially it was a problem that if the server was unavailable when it was required the game would crash. We have mitigated this issue by having the game fall back to single player mode where it only uses locally stored data.

## Proof of Skill

## Project Scope

Technically this project was quite a challenge, combined with the time restraints of this phase we had to request an additional two week iteration for the construction phase. While this did help us get Let’s Quiz ready for beta testing we now have to compress our timeline for the final phase of the project. To meet the new deadline for the final phase of the project we have shortened our iterations from 14 days to 9 days.

## Game becoming boring

Every addition we have added to the game, from multiplayer to question submission, to the various leader boards to changing theme to sci-fi has been aimed at making the game more engaging for users. If we have done our job right this will not be an issue but should it be pointed out as an issue in beta testing we will react accordingly.

## Cheating

At this stage cheating has been deemed to be a non-issue. While technically on an Android all a user would have to do is move the game to the ‘waiting’ state, ie page flip to another app, and the game will pause giving them an endless amount of time to look up the answer to the question we don’t think it will be a problem due to the trivial nature of the game. Essentially if you’re the sort of person who is going to cheat a game like Let’s Quiz, you have bigger problems in life.

## Bad questions being submitted

## infringing on existing IP and copyright

We do not believe this to be an issue. While we have not sort legal advice on the matter the basic idea of asking questions about a topic is not new and as such we do not see copyright infringement an issue for us.

# Progress Compared to Project Plan

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| --- | --- | --- | --- | --- | --- |
| **Iteration** | **Objective** | **Planned Completion Date** | **Actual Completion Date** | **Programmer** | **Notes** |
| C-1 | Multiplayer playthrough | 23-Jul | 23-Jul | Collin | Completed on time. |
| C-1 | Create tests for multiplayer playthrough | 23-Jul |  | Michelle | All tests were written on time |
| C-1 | Implement offline redundancy | 23-Jul |  | Aaron | This was deemed a low priority objective and was not started until later in the phase. |
| C-1 | Create the Game Lobby to show users ongoing games | 23-Jul |  | Collin | A functional but ugly game lobby was created on time. The final product and art work were not completed until later as functionality was deemed higher priorities. |
| C-2 | Social Media Integration (Facebook) | 6-Aug |  | Michelle | All scripts were written and buttons were connected, but needed to test functionality which was not possible due to the existence of game play problems |
| C-2 | Social Media Integration (Google) | 6-Aug |  | Michelle | Implementation of google play needed to be postponed till a working build could be uploaded to google console all scripts were written out but no functionality was implemented |
| C-2 | Create test for social media functionality | 6-Aug |  | Michelle | Tests not started for this functionality as the functionality was still being implemented |
| C-2 | Push notifications | 6-Aug |  | Charnes |  |
| C-2 | Create tests for push notifications functionality | 6-Aug |  | Michelle | Test were created on time, but were not completed at this time due to implementation issues |
| C-2 | Extend Global Leader Board to Support Top Question and Top Question Submitter | 6-Aug |  | Aaron | It was a mistake to put this as an objective before 'Voting on Questions' was implemented in the UI. The high score boards were implemented but could not be dynamically updated as the game did not allow for users to vote on questions |
| C-2 | Create tests for question leader boards | 6-Aug |  | Michelle | All tests were written on time |
| C-3 | Extend game to allow for rounds to be about specific categories | 20-Aug | 20-Aug | Collin | Implementation was quite a lot of work. As has often been the case throughout this project sending and retrieving data from the database can be quite difficult. |
| C-3 | Create tests for category specific rounds | 20-Aug |  | Michelle | All tests were written on time |
| C-4 | Allow for users to vote on questions they like or dislike | 3-Sep |  | Team |  |