Let’s Quiz

# Introduction

Let’s Quiz is an online mobile game where players can verse one another in a multiple-choice quiz game.

The app will allow users to participate in a quiz game made up of three rounds, in each round the user will play their turn and then the app will notify their opponent to take their turn.

We have been commissioned to design an online quiz game by Charles Sturt University to meet the market needs, it is their intention that we will have a fully completed application before the end of the year.

# Positioning

## Goal Statement

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| --- | --- |
| The goal of | Having two people play a multiple choice quiz game against one another |
| affects | The two players, the global score board, the Let’s Quiz server |
| the result of which | Will determine a winner between the two players in the quiz and update the overall leader board |
| a successful solution would be | A player either continues an existing game or starts a new game, the game runs to completion and the Let’s Quiz server is updated |

## Product Position Statement

Let’s Quiz will offer an online, multiplayer, quiz game which

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| For | Noncommercial mobile phone users |
| Who | Would enjoy a competitive turn based trivia game |
| Let’s Quiz | Is a turn based, multi-player, trivia game |
| That | Allows for a customizable competitive trivia quiz game against people from all over the world |
| Unlike | Quiz Up |
| Our product | Offers a more streamlined app with a user driven question pool. |

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# Stakeholder Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| User | The user is the person playing the game.  They require the app to execute without errors, to record accurate data about their game and to generally behave as a mobile app is expected to. | The user is responsible for maintaining their phone to a standard that will run the Let’s Quiz application, this is not an arduous task and should not require any effort beyond normal phone maintenance.  Let’s Quiz requires several permission, including but not limited to internet access, to send and receive push notifications and to read and write data. It is the responsibility of the user to grant the application those rights.  It is expected that the user play the game in good faith, that they do not deliberately attempt to inject malicious code or otherwise break the system. |
| Game Opponent | Let’s Quiz is a multi-player game and the opponent player, whether they have joined the game yet or not, is a stake holder.  The user’s score, questions the user has been asked and what answers they gave will all effect the opponent’s game. | The opponent player is expected to be able to receive push notifications and to take their turn when notified to do so.  At the point when they take their turn, they become a user and have the responsibilities of the user. |
| Let’s Quiz Server | User devices need to be able to access the Let’s Quiz server, to view and update information stored there.  The sever contains user information, ongoing game data and the global score board. | The server needs to be able to store and maintain several SQL tables, as well as receive and execute PHP scripts.  The server must also be available to users, this means it must have reliable up time and be a trusted location.  It is also the responsibility of the server hosting provider to offer some level of technical support to assist the Let’s Quiz development team should they need it. |
| User’s Phone | The user’s phone needs to allocate memory and ask the user for correct permissions to operate as required | It is the specific responsibility of the user’s phone to allow the application to run. This includes opening and exiting the application, maintaining granted permissions and allocating memory. |
| Facebook and Google Play | Let’s Quiz is designed to allow players to log in using their existing social media accounts.  To do so Let’s Quiz will need to interact with the social media’s SKD’s. | The Let’s Quiz development team will be relying on accurate and up to date documentation. It is the responsibility of the SKD owners to provide this as well as some level of technical support and trouble shooting.  These SKD’s become an extension of the Let’s Quiz app it is imperative that a degree of integrity is maintained by their parent companies, this specifically relates to malicious code and honestly with regard to capabilities and features. |
| Unity 3d | Unity 3d is the development platform the design team has elected to use. | The Let’s Quiz development team will be relying on accurate and up to date documentation. It is the responsibility of the Unity3D to provide documentation as well as some level of technical support and trouble shooting. |

## User Environment

### Let’s Quiz Team

There are four members of the Let’s Quiz design team, plus one member of the Charles Sturt University IT teaching faculty acting as oversight. This team is not expected to change.

### Task Structure

The task cycle and amount of time spent on each task will be situational, depending on the complexity of the particular task in question. As a part of their team charter the development team have agreed each member will deliver weekly updates on individual projects with in depth iteration meetings being held fortnightly.

### Environmental constraints

Let’s quiz is designed to run on IOS and Android mobile devices. It is a requirement of the application that the device has internet connectivity. This means that the individual device must be configured to allow the application to access the internet and that the device is in a physical location that has internet.

### Required integration

In testing it became apparent that Let’s Quiz needs to interact with the android OS in a nontraditional way. Normally when an app is not being displayed but has not been closed it is paused. For example normally if the user presses the home key, the app that they were in is paused and minimized, they then have the option to go back to their game at the spot they left it in.

Let’s Quiz is a trivia game where the rounds are timed, as such it is a requirement that the game not pause the countdown timer if, for example, the user was to open up a web browser and search for the answer.

# Product Overview

## Needs and Features

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| --- | --- | --- | --- |
| **Need** | **Priority** | **Features** | **Planned Release** |
| Quiz Game | 1 | Basic single player quiz game that asks a user questions and scores correct answers. This should be playable on an IOS and android mobile device. | April 2018 |
| Question list that can be updated by users | 1 | Connection to online database accessible to all users.  An in app submit question scene where user’s trivia questions are entered and uploaded to the server. | July 2018 |
| Living question pool that is constantly updated by users | 2 | Allow users to submit questions to the online question pool | July 2018 |
| Multiplayer Quiz Game | 2 | Connect 2 users together so they can play against each other | July 2018 |
| Allow user to have multiple games running simultaneously | 2 | Have game management page where users can see and join all their outstanding games | July 2018 |
| Have users play multiple rounds against each other making up a complete game | 3 | Ongoing games management for each user, to be handled on the server. | July 2018 |
| Allow users to login in with social media accounts | 3 | Integrate Let’s Quiz with Facebook and Google Play’s APIs | September 2018 |
| Send users push notifications that it is their turn | 3 | FireBase is the planned system to implement push notifications | September 2018 |
| Ability for users to vote on questions they like or do not | 4 | Optional button available to the user at the end of the quiz that increments a rating held against each question on the server | September 2018 |
| Global Score board containing all users | 4 | Have a high scores page that syncs with a high scores table on the Let’s Quiz server | September 2018 |
| Polished game, globally available | 5 | Publish Let’s Quiz to Apple’s App Store and Google’s Play Store | September 2018 |

# Other Product Requirements

## Quality Characteristics

### Security

User accounts will be maintained via social media SKDs or with the use of data stored on the user’s phone. This means that the users account is only as secure as their phone. We have determined that this is sufficient due to the trivial nature of the game itself and minimal personal information we have of each user.

### Reliability

Let’s quiz relies on two systems to operate, the user’s phone and the online database. The burden placed on the user’s phone is minimal, so long as they meet the minimum system requirements there should not be no problems. The online data base relies on a third party and we can only take them at their word that they will maintain 99.9% uptime, given that this is a paid service the likelihood that they will meet this promise is quite high.

### Usability

An easy to learn, easy to navigate game is a primary design goal of the Let’s Quiz team. Users should feel confident with all aspects of the game from the first time they use it, by design there are no tricks or traps that a new user will not know or fall into.

### Fault Tolerance

The most common fault predicted is incorrect answers, the user ratings and report system should help to isolate problematic questions. The proposed.

## Constraints

### Legal constraints

Let’s Quiz is a unique and independent development, we have no reason to be concerned with any breaches of copyright law or impinging on anyone’s intellectual property. The game itself will have a rating within the App Store and Play Store of 13+ just in case there is someone who may take offense at the content.

### User requirements

A final constraint of Let’s Quiz that is placed on the user and is not explicitly stated. It is the need for the user to be able to read English. At this point there is no features to assist someone who may be struggling with this part of the game and it is a barrier of entry that the user be able to read the questions and answers.

### Environmental Constraints

The user must have an internet connection to be able to play Let’s Quiz as a multiplayer game, furthermore they must be able to connect to the server.

### Market Constraints

The intention is to release Let’s Quiz using the mobile apps for each mobile platform, The Play Store and The App Store, for android and IOS respectively. These online market stores have terms and conditions that the development team and the application Let’s Quiz must heed to.

### Hardware

The hardware requirements of Let’s Quiz are very minimal, only requiring a touch screen and the most basic graphics card, almost all phones should be able to run Let’s Quiz.

### Operating System

Due to the low system requirements of Let’s Quiz it will be compatible with Android devices running Lollipop 5.0 or newer and IOS 8 or better, these versions have been around since 2014 as such we are not expecting any compatibility issues.

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| **Requirement** | **Priority** | **Planned Release** |
| User login | 2 | July 2018 |
| Reliable online server | 2 | July 2018 |
| Let’s Quiz meets the terms and conditions of the Play Store and the Apps Store | 3 | September 2018 |
| Question rating system for users | 3 | September 2018 |