Master Test Plan

9/03/2018

# **Version Information**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Authors | Description |
| 0.1 |  | Michelle Vinall | Initial draft of Master Test Plan |
|  |  |  |  |
|  |  |  |  |

# **Distribution List**

|  |  |
| --- | --- |
| Name | Function |
| Aaron Peachey | Team Member |
| Charnes Nell | Team Member |
| Collin Mckeahnie | Team Member |
| Michelle Vinall | Team Member |

# **Management Summary**

|  |
| --- |
| Project Objective  The project objective is to create an online quiz game capable of single and multiplayer modes that have integration with Facebook and Google Play Services to allow features such as sharing, challenging, viewing leader boards and achievements. |
| Test Objective and Assignment  This test plan will implement the following objectives:   * To provide test coverage for 100% of the documented requirements * To provide a testing guide for the development of all functionality and performance testing required * To execute 100% of the test cases during User Acceptance Testing * To execute 100% of the test cases during Unit Testing * To execute 100% of the test cases during Integration Testing * Provide a schedule of all proposed tests   Assigned to   * Aaron Peachey-Tester * Charnes Nell-Tester * Collin Mckeahnie-Reviewer and Tester * Michelle Vinall-Author and Tester |
| Short Description of the Test Approach  The test approach of this document is to test the software user interface and functionality via several testing techniques. |
| Results to be Realised   |  |  |  | | --- | --- | --- | | Result   * Are users able to login * Are users able to answer questions * Is the game keeping the correct score * Is the round timer working * Are all buttons working as they should * Is text readable * Is data being stored correctly * Can users check global scores * Can users check leader board * Can users check achievements * Can users add questions * Do all components work together completely * Test flows of use cases * Is the user Interface easy to navigate | Document   * Unit testing report * Unit testing report * Unit testing report * Unit testing report * UAT test report * UAT Testing * UAT testing * UAT test report * UAT test report * UAT test report * UAT test report * Integration testing report * Integration test report * UAT Testing | Delivery Date  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018  1 June 2018 | |
| Qualitative Objectives  There will be deadlines for all testing procedures. All results will be validated and an end report will document all results prior to 4 June |
| Estimated Completion  4 June 2018 |
| Test process risks and measures   |  |  | | --- | --- | | *Test process risks*   * Testing data/ environment not available * Communication problems * Delay in starting testing * Natural disasters * Undefined requirements * Inadequate testing with defects found at a late stage | *Measures to be taken*   * Prepare testing data and environments well ahead of time according the test plan * Make sure all documentation is well maintained and distributed to all team members * Add a buffer to schedule to allow for unexpected contingencies * Provide a back-up tester for all tests in case of unforeseen circumstances * Make a requirements list that is update regularly during the planning stage * Organize a thorough testing schedule, that outlines all tests and testing order | |
| Go/no-go decisions   * After each test level the test manager makes sure that a test report is drawn up. * If this is signed off on the next level can be started |

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# 1. Introduction

## Project Objective

The project objective is to create an online quiz game capable of single and multiplayer modes that have integration with Facebook and Google Play Services to allow features such as sharing, challenging, viewing leader boards and achievements.

## 1.2 Objective

This test plan will implement the following objectives:

* To provide test coverage for 100% of the documented requirements
* To provide a testing guide for the development of all Functionality and Performance Testing required
* To execute 100% of the test cases during Unit Testing
* To execute 100% of the test cases during Integration Testing
* To execute 100% of the test cases during User Acceptance Testing
* Provide a schedule of all proposed tests

## 1.3 Involved in Creating the Master Test Plan

|  |  |  |
| --- | --- | --- |
| Name | Function | Responsibility |
| Michelle Vinall | Team Member | Writing the document |
| Collin Mckeahnie | Team Member | Reviewer |
|  |  |  |

# 2. Assignment Formulation

## 2.1 Client

CSU Lecturer Jim Tulip

## 2.2 Supplier

Online Question Game Group

## 2.3 Assignment

The client wants an on-line Quiz game with multi and single player mode that can integrate with Facebook and Google Play Services. The tests outlined will be testing the functional and non-functional requirements set out in in the Initial Requirements Model document. The results from these test should show full use case realisation.

## 2.4 Scope

### 2.4.1 Functions to be tested.

* Testing the gaming environment
* Verify all game elements do what is required of them
* User interface
* User interactions
* Menus and their functions
* Readable text
* Data integrity testing
* Game flow
* Scoring and timing
* Multi-player testing/load testing
* Testing for integration and compatibility of external SDKs/databases
* Server to database connection

### 2.4.2 Functions not to be tested.

* Localization testing will not be performed in this version
* Actual testing of SDK components as these are externally tested by the companies supplying the packages

## 2.5 Preconditions and Assumptions

Preconditions

* Test plan must be completed by 9th of April.
* Testing must be completed by 4th of April.
* The prevailing project plan is boundary for this master test plan and the execution of the test project is based on this.

Assumptions

* The application will run on Android and IOS operating systems
* Standard input will be keyboard and touch

## 2.6 Acceptors and Acceptance Criteria

### 2.6.1 Acceptants

The table below states the acceptants of the Let’s Quiz application

|  |  |  |
| --- | --- | --- |
| Name | Function | Department |
| Jim Tulip | Lecturer | IT303 Lecturer CSU |
|  |  |  |
|  |  |  |

### 2.6.2 Acceptation criteria

The table below states which acceptance criteria there are for the Let’s Quiz application and to which standard they should apply:

|  |  |
| --- | --- |
| Description | Standard |
| Game must be playable on different operating systems. | High |
| The game should allow 1/multiple players. | High |
| The game must display a login scene to the user. | High |
| Menu screen must allow player to start a game. | High |
| Menu screen should allow players to invite, share and like on Facebook. | Medium |
| Menu screen must allow player to enter settings menu. | Medium |
| Menu screen must allow player to access high scores. | Medium |
| Questions must be presented to the player. | High |
| User must be able to choose an answer. | High |
| The application must be able to determine if the player has selected the correct answer. | High |
| The score of each player must be recorded. | High |
| The application must have the ability to determine the winner. | High |
| A congratulatory message should be displayed to the winning player. | Medium |
| A list of correct answers will be displayed to the user when the game is over. | Medium |
| When the game ends the program should ask the player if a new game should be started. | High |
| A timer should limit the amount of time of each round. | High |
| Application must meet the subject outline criteria | High |

# 3. Documentation

## 3.1 Basis for the Master Test Plan

The following documents are used as basis for this master test plan.

|  |  |  |  |
| --- | --- | --- | --- |
| **Document name** | **Version** | **Date** | **Author** |
| Initial Requirements Model | 0.3 |  | Michelle Vinall |
| Project Plan | 0.1 |  | Charnes Nell |

## 3.2 Standards

The following conventions and standards are applied for this test plan.

|  |  |  |  |
| --- | --- | --- | --- |
| **Document name** | **Version** | **Date** | **Author** |
| C# Coding Convensions | NA | 20 July 2015 | [https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/inside-a-program/coding-conventions#naming-conventions](https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/inside-a-program/coding-conventions%23naming-conventions) |
| PHP Coding Standards | NA | 31 March, 2008 |  |
| SQL Server Database Coding Standards and Guidelines | 1.0 | NA | SQLAuthority |

## 3.3 Test basis

The test basis contains the documentation that serves as basis for the tests that have to be executed. The overview below describes the documentation that is the starting point for testing.

|  |  |  |  |
| --- | --- | --- | --- |
| **Document name** | **Version** | **Date** | **Author** |
| Master Test Plan | 0.1 |  | Michelle Vinall |
| Initial Requirement Model | 0.2 |  | Michelle Vinall |
| Project Plan | 0.1 |  | Charnes Nell |

# 4. Test Strategy

## 4.1 Product Risk Analysis

During the risk assessment the test goals were also formulated. These can be found together with the corresponding characteristics in table below.

|  |  |  |
| --- | --- | --- |
| Test goal | Description | Characteristic |
| Functionality | To ensure the application works as intended | Game progress, performance, basic usability, error conditions, accessibility |
| OS compatibility | To ensure game works in all intended operating systems | Compatibility with android and IOS |
| Data integrity | Verify the data stored in the database is accurate and reliable | Data correctness |

# 5. Approach

## 5.1 Test Levels

For this MTP the following test levels are acknowledged:

|  |  |
| --- | --- |
| Test Level | Goal |
| Unit Testing | To isolate each part of the program and test that the individual parts are working correctly |
| Integration Testing | To test the interaction between individual modules. |
| User Acceptance Testing | Testing of the application in a real environment |

## 

## 5.2 The Unit Testing

### 5.2.1 Goal

To isolate each part of the program and test that the individual parts are working correctly

### 5.2.2 Short Description

The code will be broken into units and individually tested using JUnit

### 5.2.3 Responsible

Aaron Peachey

Charnes Nell

Collin Mckeahnie

Michelle Vinall

## 5.3 The Integration Testing

### 5.3.1 Goal

To test the interaction between individual modules

### 5.3.2 Short Description

### 5.3.3 Responsible

Aaron Peachey

Charnes Nell

Collin Mckeahnie

Michelle Vinall

## 5.4 The User Acceptance Testing

### 5.4.1 Goal

Testing of the application in a real environment

### 5.4.2 Short Description

### 5.4.3 Responsible

Aaron Peachey

Charnes Nell

Collin Mckeahnie

Michelle Vinall

## 5.5 Phasing Per Test Level

Phases to plan, execute and complete testing of each testing level

* Analysis of testing requirements
* Planning of tests to be used
* Development of tests
* Execution of tests
* Reporting of test results
* Analysing test results
* Documentation of test results
* Test closure

## 5.6 Entrance and Exit Criteria for Each Test Level

### 5.6.1 Functional Acceptance Test

### 5.6.2 User Acceptance Test

# 6. Organization

## 6.1 Organization structure

The team consists of five members:

Aaron Peachey Team Member

Charnes Nell Team Member

Collin Mckeahnie Team Member

Michelle Vinall Team Member

Jim Tulip Assessor

## 6.2 Roles, tasks and responsibilities

|  |  |  |
| --- | --- | --- |
| Name | Function | Responsibility |
| Aaron Peachey | Team Member |  |
| Charnes Nell | Team Member |  |
| Collin Mckeahnie | Team Member | Reviewer of MTP |
| Michelle Vinall | Team Member | Author of MTP |
| Jim Tulip | Assessor | Approval of MTP |

## 

## 6.3 Structure of meetings

## 

## 6.4 Structure of reporting

## 6.5 Completion

# 7. Infrastructure

## 7.1 Test environments

## 7.2 Test tools

## 7.3 Office setup

# 8. Management

## 8.1 Test process management

## 8.2 Test infrastructure management

## 8.3 Test product management

## 8.4 Defects procedure

# 9. Test Process Risks and Countermeasures

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number | Event | | Consequence | Impact | Chance | Score | Countermeasures | Owner |
| 01 | | Testing data/ environment not available | Requirements are missing, incomplete or incorrect and cause a delay | 3 | 1 |  | Prepare testing data and environments well ahead of time according the test plan |  |
| 02 | | Communication problems | This can occur when test documents are not maintained or inadequate communication concerning testing is given to team members. | 3 | 2 |  | Make sure all documentation is well maintained and distributed to all team members |  |
| 03 | | Delay in starting testing | The schedule of testing is often inadequate for the amount of testing that should be performed. | 3 | 3 |  | Add a buffer to schedule to allow for unexpected contingencies |  |
| 04 | | Natural disasters | Team member not available due to unforeseen reason | 2 | 1 |  | Provide a back-up tester for all tests in case of unforeseen circumstances |  |
| 05 | | Undefined requirements | If requirements are unknown or incorrect this can cause confusion when testing causing a delay | 3 | 2 |  | Make a requirements list that is update regularly during the planning stage |  |
| 06 | | Inadequate testing with defects found at a late stage | These defects can be time consuming to fix | 3 | 2 |  | Organise a thorough testing schedule, that outlines all tests and testing order |  |

Impact:

* 3 - High
* 2 - Medium
* 1 - Low

Chance:

* 3 - Frequent
* 2 - Occasional
* 1 – Unlikely

Risk Matrix – Score:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | Impact Severity | | |
| 1 | 2 | 3 |
| Chance Factor | 3 | Moderate | High | High |
| 2 | Low | Moderate | High |
| 1 | Low | Low | Moderate |

# 10. Global Estimation & Planning

## 10.1 Estimation

## 10.2 Planning

## 10.3 Milestones

# 11. Glossary