

# **TEST PLAN AND CASES (TPC)**

Team 04

10/16/2017

# Version History

<b>Date</b>	<b>Author</b>	<b>Version</b>	<b>Changes made</b>	<b>Rationale</b>
10/16/17	William Goishi	1.0	<ul style="list-style-type: none"> <li>• Original template for use with Will v1.0</li> </ul>	<ul style="list-style-type: none"> <li>• Initial draft for use with Will v1.0</li> </ul>

# Table of Contents

Version History .....	2
Table of Contents .....	4
1. Introduction .....	5

# 1. Introduction

In this project “Populic” we plan on testing the functionalities of the application to ensure to the client and users that the core and sub-functionalities work in accordance to their wants/expectations. Our focus for testing will be on the user interface, COTS products, and core backend functionalities associated with the mobile application. We will test for invalid data and test to ensure that off-nominal requirements are met and that there is very minimal to no experience where a bug or issue can inhibit the user from properly using the app. The testing will take on two stages starting with modular testing, where we will test the core functionalities of each module. In our next stage we will apply testing towards integration of the modules.

Another form of testing we will undergo is repetitive user experience testing, where the client and a group of users will beta test the application to ensure functionalities are in check and the UI is easily usable. This will allow the application to undergo real situation testing which will provide the developers with scenarios that may not be seen within a confined inner testing group or a constrained environment. The ongoing feedback from the users will help in creating test cases to further improve the application as a whole.

## 2. Test Strategy

From the beginning to the end of the application's development stages, we will establish testing from a user base after each increment of development. The testing will begin with establishing test cases to figure out the most basic of problems that can occur and will be established by what the client wants for the application. When the application passes these tests, then we will deploy and develop more test cases as problems that weren't expected or apparent arise from the heavy usage of the app from the user group. These test cases will eliminate the rest of the issues in association with the application.

Another gage of testing will also be off of test cases developed by user feedback. These cases will embody not technical issues or bugs, but friendliness of the application and will be used to either improve user interface, current modules or develop future features for the application. The main strategy for our project is to establish a broad scope of testing and then incrementally lower the scope to more rare and meager issues.

### 2.1 Hardware Testing

For our mobile application, the major first release of the application will focus on ios development. Utilizing react-native technology will allow for cross platform development but the first usage will be focused towards apple devices since a majority of the developers utilize apple devices. In preparation for testing, the development team has already tested the deployment of the application onto an apple device. For further future testing, the team will focus on ensuring that cross platform devices all properly work, even on the basis of differential hardware specs associated with the many devices available on the market.

### 2.2 Requirements Traceability

Table 1: Requirements and Traceability Matrix

Requirement ID	Verification ID	Test Case ID
OC-6	Demonstration/ Testing	TC-01

## 3. Test Identification

### 3.1 Mobile Application Interface

In testing the user interface, the majority of the testing revolved around the client for the initial showing of the UI. Meetings were held with the client that allowed him to get associated with the feel and operation of the UI. After each meeting test cases were build based on the satisfaction of the client. If there were changes that needed to be done, those changes were tested and deployed till all test cases passed.

## **3.2 Test Identifier TC-01: User Interface Game**

### **3.2.1 Test Level**

Software Item Level

### **3.2.2 Test Class**

UI Test

### **3.2.3 Test Completion Criteria**

User Interaction is seamless and the layout of the application is naturally understandable

- User must be able to ease through the process within 1 – 2 tries of usage
- The color scheme of the pages are consistent and make sense in relation to their objective
- Responsiveness of the application notifies user and aide's user in assuring they understand what happens after a certain action
- User interface doesn't glitch or take too much of the users time in loading

### **3.2.4 Test Cases**

Test Case Number	TC-0 User Interface Game
Test Item	Test whether or not the user interface satisfies its requirements and meets the demands of the client/users.
Test Priority	Must
Pre-Conditions	User must be registered with system
Assumptions/Constraints	User is aware of how to use the game feature UI of the application.

Pass/Fail Criteria	User can easily operate the game UI and fluidly can operate it without errors or bugs.
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### 3.2.5 Test Results

## 4. Resources and Schedule

On our team we have one IV&V member to oversee validation and testing of documents and modules in relation to the project. The scheduling for testing is based on the cycle of developmental increments. Every time an objective, functionality or document is completed, there is a phase where testing takes place. The results of testing are feed back to the developers who then either pass the testing or set new goals in the next increment to develop and fix the cases that were missed.

### 4.1 Resources

Towards application testing, we have an emulator setup along with actual devices to test and assure that the mobile application works. We also have all the necessary COTS products to aid in assuring that data is valid and the backend functionalities do as they are required.

### 4.2 Staffing and Training

The application will contain inner tutorials which will help in making sure users are given a chance to understand some of the basics of the application before actually using and interacting with the app.

### 4.3 Schedule

Date	Test Identifier	Responsible Person	Resources	Training Needs
09/30/17-10/06/17	TC-01	Will		