

FollowMe Android Application

Test Plan

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Introduction

The purpose of testing this mobile application is to make sure it is working properly before presenting it to our clients for use. Our goal is to get all the bugs out of the program so that it will run the way it was designed to run.

Constraints

One constraint that we have is that the members of the Quality Control Team don't have extensive programming experience with Android. Another constraint is that we only have two phones to work with to test the application.

Test Items & Environment

The bug tracking software we decided to use is called Axosoft*. It is an easy to use website (<https://bridgewater.axosoft.com>) that allows the Quality Control Team and the App Development team to easily track the bugs that are currently in the code. The phones we are using to run and test the app are two Moto G Android smartphones (phone version: 4.4 Kit Kat; app version: 1.08).

****Tutorial on Axosoft:***

The Axosoft site is fairly simple to use and easy to understand once you get an understanding of how to use the site. In the Organize Panel, there are four sections; Projects, Releases, Users & Teams, and Customers.

The Projects panel shows the projects that are currently being worked on. The user can add or edit their projects by clicking on the "Add" or "Edit" buttons at the top of the panel. When the user clicks the "Add" button a box shows up that asks you to enter the name of your new project. The Release panel shows the projects you have access to. In the Users & Teams panel, users can add users and also create teams within the panel. To add or edit these users, click on the "Add" or "Edit" buttons at the top of the panel. When adding a user, you simply enter the users e-mail address into the box and Axosoft sends them an email explaining to them how to confirm that they have been added.

In the Customers panel, you can add or edit customers but clicking the "Add" or "Edit" buttons at the top of the panel. When adding a customer, it will ask you to type the company/customer name and also a URL.

The main panel on the page is where you can add bugs and you add them by clicking the "Add" button at the top of the panel. When you click the "Add" button, it will show you different options you can set. You add a title, assign due dates for when you want the bugs to be tested by and assign who should test it. You can also assign priority to the bugs and the severity of the bugs.

Approach

The type of testing we are using for this mobile application is manual black box testing. Black box testing is used to test the input/output behavior of each test case.

Roles

Dylan McGraw: Manager of the team and in charge of writing up everything but the test cases for this document (Introduction, Constraints, Test Items & Environment, Approach, Roles, Schedule, and References). Dylan's role in the testing process is to manage the team and assign code to members to test.

Paul Rachner: Team member in charge of writing the other half of the test cases for this document (Splash Screen, Create Account, Login, View Main Screen, Load Excursion, Start Recording Route, and Add Observation). Paul's role in the testing process is to test the code that was passed down from the App development team.

Brandon Larsen: Team member in charge of writing half of the test cases for this document (View Observation, Edit Observation, Stop Recording Route, Edit Excursion, Save Excursion, Logout, and Exit). He was also responsible for finding a free bug tracking software. Brandon's role in the testing process is to test the code that was passed down from the App development team.

Schedule

Wednesday, November 12- Complete Test Case document

Once the Test Case document is completed, the Quality Control team will be getting training from App Development team on how to install the application via the website.

After this document is complete, we are going to test for bugs in the code on a weekly basis or as often as needed. The App Development team will pass along their code to the Quality Control team manager. The code will then be passed down to the members of the Quality Control team to test the code for bugs.

Wednesday, December 3- Have the bug free application ready to present to the clients

References

The Requirements Analysis Document (RAD) is available on the mobile application website. (<http://bc-followme.azurewebsites.net/documents.html>)

For more information on how to use Axosoft, the following link goes more in depth:

<http://www.youtube.com/watch?v=r8ocw0-euOo><http://www.youtube.com/watch?v=r8ocw0-euOo>

Test Cases

Test Case ID TC001 “Splash Screen”

Summary Verify that when the app is not loaded in memory the splash screen is displayed for a brief period of time and the Login screen is displayed after the splash screen.

Prerequisite The application is not loaded in memory.

Instructions Perform the following actions.

Test Data and Expected Results

1. Click on the app icon on the phones application screen.

RESULT: The app should show the splash screen. It should go directly to the Login screen.

Test Case ID TC002 “No Splash Screen”

Summary Verify that when the app is currently loaded in memory and a user is not logged on, the splash screen is not displayed and the Login screen is loaded.

Prerequisite Load the app, then press the phones home button.

Instructions Perform the following actions.

2. Click on the app icon on the phones application screen.

RESULT: The Login screen should appear without the Splash screen appearing.

Test Case ID TC003 “Create Account”

Summary Verify that a new account can be created as long as the user chooses a username that is not in the database and verify that the input fields restrict user input.

Prerequisite The app is on the Create Account screen.

Instructions Enter the following valid data except for the fields specified below. Press Create Account to illicit a response.

First name:	Joe
Last name:	Smith
Email:	<u>joe@gmail.com</u>
Username:	Joe
Password:	password8

Test Data and Expected Results

1. Enter “heyhowareyou” in the Email field.

RESULT: System should display an error message stating they must enter a valid email address.

2. Enter “mynameis#” in the First Name field.

RESULT: System should display an error message stating only alpha characters are allowed.

3. Enter “McGregor#” in the Last Name field.

RESULT: System should display an error message stating that only alphabet symbols are allowed.

4. Enter “Classroom8#” in the Password field.

RESULT: System should display an error message stating that only alphanumeric symbols are allowed.

5. Enter “class8” in the Password field.

RESULT: System should display an error message stating the password must be at least 8 symbols long.

6. Enter “8Classroom” in the Password field.

RESULT: System should display an error message stating the password must begin with an alphabet symbol.

7. Enter “classroom” in the Password field.

RESULT: System should display an error message stating the password must contain at least one numeric symbol.

8. Enter “password8” in the Password field and “password9” in the Confirmation field.

RESULT: System should display an error message stating the passwords do not match.

9. Enter all of the valid data given above.

RESULT: System should create a new account.

10. Enter all of the valid data given above, again.

RESULT: System should display an error message stating that the user already exists.

11. Click the Cancel button.

RESULT: The registration screen should close and the Login Screen should appear.

Test Case ID TC004 “Login”

Summary Verify a user can log in.

Prerequisite Application has the Login screen loaded with a user account for “Joe” preinstalled.

Instructions Perform the following actions.

Test Data and Expected Results

1. Enter “Bill” in the Username field and “password8” in the password field and press the Login button.

RESULT: System should display an error message stating the username does not exist and clears the fields.

2. Enter “Joe” in the Username field and “password9” in the password field and press the Login button.

RESULT: System should display an error message stating the password is incorrect and clears the fields.

3. Enter “Joe” in the Username field and “password8” in the Password field, then press the Login button.

RESULT: System should log the user in and display the Main screen.

Test Case ID TC005 “View Main Screen”

Summary Verify that the menu options work, that the Google map can display and that the users current location can be displayed via a marker.

Prerequisite User “Joe” is logged into the app and has either Wi-Fi or Data on.

Instructions Perform the following actions.

Test Data and Expected Results

1. Turn GPS off in the phone settings and return to the Main screen.

RESULT: The map is displays on the Main screen with a message prompting the user to turn on the GPS function on the phone.

2. Turn GPS on in the phone settings and return to the Main screen.

RESULT: The map is displayed with the user’s current location.

3. Click on the menu button in the upper left corner.

RESULT: A slider menu should appear with the following options: New Excursion, Edit Excursion, Load Excursion, Add Observation, Edit Observation, Settings, About, Log Off.

4. Click the Logout button in the slider menu.

RESULT: The application will return the user to the Login screen.

Test Case ID TC006 “Edit Excursion”

Summary The user is able to edit data for an excursion.

Prerequisite The application is displaying the Main screen, and the default “My Excursion” is loaded.

Instructions Click on Edit Excursion and enter the following data.

Test Data and Expected Result

1. Leave all fields blank and press Save.

RESULT: An error message should appear that states that an excursion name is required.

2. Enter “Joe’s Private Excursion” in the name field and leave the description field blank. Leave the Transit Mode and Privacy Mode set to their defaults (Walking, Private); then click Save.

RESULT: The Main screen should load with “Joe’s Private Excursion” printed in the menu bar. The changes should be persistent when Edit Excursion is loaded again.

3. Enter “Joe’s Private Excursion” in the description field, leave the Transit Mode and Privacy Mode set to their defaults (Walking, Private); then click Save.

RESULT: The Main screen should load with “Joe’s Private Excursion” printed in the menu bar. The changes to the description should be persistent when Edit Excursion is loaded again.

4. Leave the Name and Description fields unchanged. Set the Transit Mode to “Driving”, then click Save.

RESULT: The Main screen should load with “Joe’s Private Excursion” printed in the menu bar. The changes to the Transit Mode should be persistent when Edit Excursion is loaded again.

5. Set the Name and Description fields to “Joe’s Public Excursion”. Set the Privacy Mode to “Public”, then click Save.

RESULT: The Main screen should load with “Joe’s Public Excursion” printed in the menu bar. The changes to the Privacy Mode should be persistent when Edit Excursion is loaded again.

6. Click “Cancel”, the user should return to the main screen.

RESULT: The Main Screen should load with “Joe’s Public Excursion” loaded.

Test Case ID TC007 “Start/Stop Recording Route”

Summary Verify that the app records the GPS location and draws the route on the map.

Prerequisite Main screen is displayed, user “Joe” is logged on, and excursion “Joe’s Public Excursion” is loaded. The phone is positioned so that it can get a GPS location.

Instructions Perform the following steps.

Test Data and Expected Results

1. Click the Start Recording Route button and walk half way around McKinney Hall.

RESULTS: The route traveled should display on the map with a green marker at the beginning of the route.

2. Click the Stop Recording Route button and walk one quarter around McKinney Hall.

RESULT: The route from step 1 should be displayed on the map with a green marker at the beginning of the route and a red marker at the end. The route traveled since pressing the Stop Recording Route button should not be displayed on the map.

3. Click the Start Recording Route button and walk the remaining one quarter around McKinney Hall.

RESULTS: The route from step 1 should be displayed on the map with a green marker at the beginning of the route and the red marker should disappear. The route traveled in step 2 should not be present on the map. The route from this step should be displayed on the map.

4. Click on the Stop Recording Route button.

RESULT: The route from step 1 should be displayed on the map with a green marker at the beginning of the route. The route traveled in step 2 should not be present on the map. The route from step 3 should be displayed on the map with a red marker at the end of the route.

Test Case ID TC008 “Start/Stop Recording Route – No GPS”

Summary Verify that the app displays an error message when the user attempts to turn route tracking on when the GPS can not get a current location.

Prerequisite Main screen is displayed, user “Joe” is logged on, and excursion “Joe’s Public Excursion” is loaded. The phone is positioned so that it can’t get a GPS location.

Instructions Perform the following actions.

Test Data and Expected Results

1. Press the Start Recording Route button.

RESULT: An error message should state that the user must move to a location where GPS can be obtained.

Test Case ID TC009 “Add Observation”

Summary Verify that observation, when added, appear as markers on the map and are stored locally. The user should be able to click on marker to display the text of the observation.

Prerequisite The Main screen is displayed with “Joe” logged on and “Joe’s Public Excursion” loaded. The device has a line of sight with the sky so that a GPS location can be obtained and the device is recording the users location.

Instructions Click Add Observation from the slider menu on the Main screen and follow directions below.

Test Data and Expected Results

1. Without entering a title or description, click Save.

RESULT: An error should occur stating that the user must enter a title.

2. Enter “Joe’s Observation” in the Title field, and leave out the description, press Save.

RESULT: an error should occur stating a description must be entered.

3. Enter “Joe’s Observation” in the Description field while leaving the Title field blank, click Save.

RESULT: An error should occur stating that a title is required.

4. Enter “Joe’s Observation” in both Title and Description fields and click Save.

RESULT: The observation should be saved and a marker should appear on the map on the Main Screen where the observation was added. Changes should be persistent when viewed in the Edit Observation screen.

5. Click on the observation marker on the map.

RESULT: The text of the observation should appear on the screen.

Test Case ID TC010 “Add Observation – No GPS”

Summary Verify that observation can't be created when the app can't get a GPS location.

Prerequisite Main screen is displayed with “Joe” logged on and “Joe’s Public Excursion” loaded.

Instructions Perform the following actions.

Test Data and Expected Results

1. Turn on tracking and position the device so that it can't get a GPS location. Then click Add Observation.

RESULT: The button will not be clickable.

2. Turn off tracking and position the device so that it can get a GPS location. Then click Add Observation

RESULT: The button will not be clickable.

Test Case ID TC011 “New Excursion”

Summary Verify that the user can create a new excursion and the previous excursion is saved.

Prerequisite The app is on the Main Screen with “Joe” logged on and the excursion named “Joe’s Public Excursion” loaded.

Instructions Follow the steps below.

Test Data and Expected Results

1. Click on New Excursion in the Main Screens slider menu.

RESULT: The Main Screen should appear with “My Excursion” printed on the menu bar. Click on Edit Excursion. The Edit Excursion screen should appear with no text in the Description field. “Joe’s Public Excursion” should be visible from the BC-FollowMe web site.

2. Click on Load Excursion.

RESULT: “Joe’s Public Excursion” should be listed.

3. Click on “Joe’s Public Excursion” from the Load Excursion list.

RESULT: The Main screen should appear with “Joe’s Public Excursion” in the menu bar with a route displayed on map.

4. Click on Edit Observations from the slider menu on the Main screen.

RESULT: “Joe’s Observation” should be listed, and when clicked should show the information for the observation.

Test Case ID TC012 “Load Local Excursion”

Summary Verify that a local excursions can be loaded.

Prerequisite The app has the Main screen loaded with “Joe” logged on and a default excursion loaded.

Instructions Perform the following actions.

Test Data and Expected Results

1. Click Load Excursion in the slider menu.

RESULT: “Joe’s Public Excursion” should be listed.

2. Click Load Excursion in the slider menu and choose “Joe’s Public Excursion”.

RESULT: The Main Screen should load with “Joe’s Public Excursion” in the menu bar with Joe’s route displayed on the map and Joe’s observations are viewable from the Edit Observations screen.

3. The user clicks the Cancel button.

RESULT: The Load Excursion screen closes and the Main screen is loaded with the current excursion unchanged.

Test Case ID TC013 “Load Cloud Excursion”

Summary Verify that a public excursions in the cloud can be loaded when Wi-Fi or Data is on.

Prerequisite Another phone is used to add the excursion data listed below. The test phone has the Main screen loaded with “Joe” logged on and “Joe’s Public Excursion” loaded. The phone has Wi-Fi or Data on.

Excursion:	Name:	Sue’s Public Excursion
	Description:	Sue’s Public Excursion
	Share Mode:	Public
	Transit Mode:	Walking
	Original Author:	Sue
	Publisher:	Sue
	Route:	Data from a walk around the football field.
	Observation Name:	Sue’s Observation
	Observation Desc:	Sue’s Observation

Instructions Perform the following steps.

Test Data and Expected Results

1. Click Load Excursion in the slider menu.

RESULT: “Sue’s Public Excursion” should be listed.

2. Click Load Excursion in the slider menu and choose “Sue’s Public Excursion”.

RESULT: The Main Screen should load with “Sue’s Public Excursion” in the menu bar and Sue’s route displayed on the map and Sue’s observations are viewable in from the Edit Observation screen.

Test Case ID TC014 “Edit Observation”

Summary Verify that the user is able to view a previously saved observation.

Prerequisite The app is at the Main screen with “Joe” logged on and “Joe’s Public Excursion” loaded.

Instructions Perform the following actions.

Test Data and Expected Results

1. Click on the Edit Observations button in the slide menu on the Main Screen.

RESULT: A list of observations should appear with “Joe’s Observation” listed.

2. Click on “Joe’s Observation” in the list of observation.

RESULT: The Edit/Add Observation screen should appear.

Test Case ID TC015 “Logout”

Summary Verify that the user is able to log out of the application through the Logout button.

Prerequisite The application is on the Main Screen with “Joe” logged in.

Instructions Follow the directions below.

Test Data and Expected Result

1. Press the Logout button in the slider menu.

RESULT: The user is returned to the Login screen.