

Coupons Nao!

Test Results

COP4331_001, Spring 2011

Modification history:

VERSION	DATE	WHO	COMMENT
v0.0	4/17/2011	Chris Nergard	Wrote most sections
v0.1	4/21/2011	Taylor Kourim	Edited some test cases

Team Name: A-Team

Team Members:

- Stephen Bryant - sbryant31@gmail.com
- Taylor Kourim - tkourim@knights.ucf.edu
- Daniel Kaplan - kaplan@knights.ucf.edu
- Isaiah Walker - senthose@gmail.com
- Chris Nergard - cnergard@gmail.com

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SECTION 1: Introduction

The overall objective of the test is to verify the software is coded correctly and performs its tasks without any bugs. Testing will also help verify if the software is meeting the requirements set forth by the client. The testing will also help find any bugs or logic errors that may have occurred during the programming.

Reference Documents (*Available at couponsnao.sourceforge.net*)

- Concept of Operations
- Project Plan
- SRS

SECTION 2: Description of Test Environment

The software for our testing environment will be the Android SDK, ADT Plug-in for Eclipse, Android Emulator (AVD), TortoiseSVN, and SourceForge.net. The Android SDK and ADT Plug-in are used for the actual coding of the project while TortoiseSVN and SourceForge.net are used for sharing files between the team. The Android Emulator is used to test the application for those who do not have an Android phone. The hardware used is teammate Isaiah's Android cell phone and Taylor's Android developer phone.

The testers will be the developers. Actual users will only be able to test the application if our team chooses to submit it to the Android Market at the end of the semester. Since we have two test environments (Android phone and Android Emulator), the software will end up operating on the Android phone but can also in the emulator.

SECTION 3: Stopping Criteria

The testing will go as long as possible until an error that cripples the functionality is found. All errors will then be reported to the development team with the crippling errors having the highest priority. If there is an error with a well-defined workaround than attempt will be made to fix the error to work in the expected manner unless there is not enough time to fix it. If no errors are found, then tests will be conducted to see if any unwanted behavior can be induced in its current state. Then if no such cases can be found and there are no cosmetic errors then the product will be considered ready for delivery.

SECTION 4: Description of Individual Test Cases

OBJECTIVE	DESCRIPTION	TEST CONDITIONS	EXPECTED RESULTS
1. Startup	Make sure the application loads to the home screen.	See test environment	Application loads successfully and doesn't crash
2. Switching Activities	Test to make sure the buttons correctly go to the right screen and can return back the original.	See test environment	The buttons functional properly and lead to the correct page.
3. Location Testing	Testing if the GPS latitude and longitude coordinates are correct and gives the correct location.	Various locations using the Droid developer's phone.	Correctly gets the location at all points.
5. List Sorting	Making sure the list view sorts the locations by distance.	Various locations using the Droid developer's phone.	The list shows the locations in order by distance than alpha order is the distance is the same.
6. Rating System	Make sure the voting system correctly functions.	See test environment	The ratings are saved and the statistical overall rating is calculating correctly.
7. GUI	Making sure the GUI looks correctly in all resolutions.	See test environment	Each resolution functions correctly.
8. Internet/GPS	Checking if the application correctly has access to the Internet and GPS capabilities.	Various locations using the Droid developer's phone.	Has access to the Internet and GPS.
9. WiFi/Cellular Signal	Make sure the phone has the ability to use Wifi and has cellular reception.	Various locations using the Droid developer's phone.	Has WiFi and has cellular reception.
10. Uploading/Maintaining Coupons	Confirming that coupons are able to be uploaded and that they are removed after they have expired or have been sufficiently down rated.	See test environment	Coupons can be successfully uploaded and are removed from the data base when they expire or are rated down sufficiently.
12. Internet/GPS Failure	Make sure that if an Internet/GPS signal cannot be obtained that the user be able to retry.	Various locations using the Droid developer's phone.	If the Internet/GPS fail then a retry option should appear.

- Test case #4 was deleted because the map view will not be implemented
- Test case #11 was deleted because of a design change for the application to boot to a home screen instead of the list view of companies

Section 5: Actual Testing Compared to Planned Testing

Actual testing of the application, at first, became almost impossible to test until a log command was used to display our error messages. After that the concern was whether the problem arose from the application or the database. Once the error was narrowed down to those two possibilities, decoding the error message to discover the actual cause of the error was our next step. Furthermore, this general case tested was what we planned for except for the problem of displaying our error messages and the unclear meaning of some of the error messages.

TEST CASE NUMBER	WHO TESTED	DATE OF TEST	ENVIRONMENT	PASS/FAIL
1	Taylor Kourim	4/7/2011	Android Emulator	Pass
1	Taylor Kourim	4/17/2011	Android Phone	Pass
2	Taylor Kourim	4/7/2011	Android Emulator	Pass
3	Stephen Bryant	4/13/2011	Android Emulator	Fail: Manually setting location is incompatible with Android 2.3.3
3	Stephen Bryant	4/13/2011	Android Emulator	Pass
3	Taylor Kourim	4/17/2011	Android Phone	Pass
5	Taylor Kourim	4/17/2011	Android Emulator	Fail: Never implemented sort by distance. Sorts by rating, name, expiration
6	Chris Nergard	4/11/2011	Android Emulator	Pass
7	Taylor Kourim	4/17/2011	Android Emulator	Pass
7	Taylor Kourim	4/17/2011	Android Phone	Fail: Cannot scroll on smaller resolution phones in landscape mode
8	Stephen Bryant	4/13/2011	Android Emulator	Pass
8	Stephen Bryant	4/13/2011	Android Phone	Pass
9	Taylor Kourim	4/17/2011	Android Phone	Pass
10	Chris Nergard	4/7/2011	Android Emulator	Fail: Two methods failed to send image data
10	Chris Nergard	4/7/2011	Android Emulator	Fail: Http Post method only sends Strings
10	Chris Nergard, Daniel Kaplan	4/7/2011	Android Emulator	Fail: Incompatible variable names
10	Chris Nergard, Daniel Kaplan	4/11/2011	Android Emulator	Fail: Error in decoding the String data of the image on the database
10	Chris Nergard	4/11/2011	Android Emulator	Fail: Test image failed to be declared correctly
10	Chris Nergard	4/11/2011	Android Emulator	Pass
12	Taylor Kourim	4/21/2011	Android Emulator	Fail: Program crashes when location cannot be found

Section 6: Conclusion

All aspects of our application have been tested extensively, both as part of the test plan, and out of necessity as unit testing among the individual developers exposed many faults. Much of the time in developing this application went into discovering and fixing faults, and doing our best to avoid a total system crash at all times.

There are still some issues that exist in the application, such as it crashing when a location can't be found (Test Case 12). However, we did not have enough time to research a fix for this. This is the only major error to still exist in our application, the vast majority of all errors have been fixed due to testing.