

Mobile Student Lookup

Milestone 4 Hand-In Document

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Executive Summary

In the progress of the Mobile Student Lookup Application, we designed and created extensive Tests Cases to be used to test the system's functionality and fidelity. The Test Cases cover all the Use Cases presented in Milestone 3 and other possible scenarios that the user may encounter. We also included detailed descriptions of the Coding Standards and processes we would use for handling and controlling changes in requirements and other parts of the system. These have been discussed with and approved by the client.

Introduction

In the previous milestones, requirements such as features were defined and detailed. These features were then presented in a prototype in Milestone 3, with additional requirements that could not be shown, such as hardware specifications. This milestone checks if those requirements are met through Test Cases and outlines how the project will be maintained throughout the coding process. Once the system has been tested to ensure that it functions as intended, users will be chosen to sample the system and see if they enjoy the system layout and design.

Coding Standards

Most of the coding standards used for this application will adhere to the Apple coding standards for Cocoa (Apple Inc., 2010), which is the API for the iOS. Some examples of guidelines in the standards handbook that we would follow include: not having “do”, adverbs, or adjectives before the verb part of method names, starting method names with lowercase, using const to create constants for floating point values, not naming items with a name that begins with two underscores (these are reserved for objects created directed by Apple), and how to design initializers.

A variance from the coding standards we decided to do is use spaces instead of tabs for indentation.

Change Control

We will use Github for our version control during the coding process. Github is an website for software development projects and has a version control system to manage code. Github will track bugs marked by users and also features requested by others. The version control system will handle version conflicts if and when they arise. Eventually, the milestones and other written documents created in the development of the application will be uploaded to a wiki on Github; Github requires free projects hosted on the site to be open-source, so we will provide our documentation to others to fulfill the spirit of open-source.

If we would receive requests from others, their requests will be marked as a bug at a certain location in the code, whichever part of the code that is most relevant to their inquiry. Then, the developers would notice the bug and decide amongst themselves and with the client(s) whether to fulfill the request or deny it. Their decision would be influenced in part by the level of sophistication and detail provided in the request; if the developers and/or client cannot understand exactly what the request is asking for, it cannot be implemented. A majority vote will decide whether to address this bug or feature. To prevent a single person or group of people from vetoing every request, each person has a limit of five rejects allowed for every ten request received.

Test Cases

Invalid or no credentials use case

Test Case ID	Scenario	Description	Condition: Username and password are correct	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	V	User is logged in and is viewing his/her own schedule
2	1	Basic Flow: username or password is incorrect	I	V	User is prompted to re-enter username and password
3	2	Alternate Flow: No Network Connection	N/A	I	User views error stating that network connection required for this app.

View Own Schedule

Test Case ID	Scenario	Description	Condition: User is currently on "My Schedule" tab	Condition: Valid credentials are stored in the app	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	V	V	User views his/her own schedule in a tabular format
2	2	Alternate Flow: username or password is incorrect	N/A	I	V	User is prompted to re-enter username and password
3	3	Alternate Flow: No Network Connection	N/A	N/A	I	User views error stating that network connection required for this app.

Search By Username

Test Case ID	Scenario	Description	Condition: User typed in complete, correct username	Condition: Valid credentials are stored in the app	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	V	V	User views an information page on the user with the specified username.
2	2	Alternate Flow: User typed an incomplete or partial username	I	V	V	User views a list of usernames that match the current search entry. Selecting any one will take the user to the information page on the user with the selected username. If no matches, an empty list will be displayed.
3	3	Alternate Flow: username or password is incorrect	N/A	I	V	User is prompted to re- enter username and password
4	4	Alternate Flow: No Network Connection	N/A	N/A	I	User views error stating that network connection required for this app.

Search By Classroom

Test Case ID	Scenario	Description	Condition: User typed in complete, correct classroom number	Condition: Valid credentials are stored in the app	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	V	V	User views an information page on the classroom with the specified classroom number.
2	2	Alternate Flow: User typed an incomplete or partial classroom number	I	V	V	User views a list of classroom numbers that match the current search entry. Selecting any one will take the user to the information page on the classroom with the selected classroom number. If no matches, an empty list will be displayed.
3	3	Alternate Flow: username or password is incorrect	N/A	I	V	User is prompted to re- enter username and password
4	4	Alternate Flow: No Network Connection	N/A	N/A	I	User views error stating that network connection required for this app.

Search By Course ID

Test Case ID	Scenario	Description	Condition: User typed in complete, correct username	Condition: Valid credentials are stored in the app	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	V	V	User views an information page on the course with the specified course ID.
2	2	Alternate Flow: User typed an incomplete or partial username	I	V	V	User views a list of course IDs that match the current search entry. Selecting any one will take the user to the information page on the course with the selected course ID. If no matches, an empty list will be displayed.
3	3	Alternate Flow: username or password is incorrect	N/A	I	V	User is prompted to re- enter username and password
4	4	Alternate Flow: No Network Connection	N/A	N/A	I	User views error stating that network connection required for this app.

Search Future or Past Schedule

Test Case ID	Scenario	Description	Condition: User selects valid quarter from individual's information page	Condition: Valid credentials are stored in the app	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	V	V	User views the schedule of the individual from the selected quarter
2	2	Alternate Flow: User selected an invalid quarter	I	V	V	User will see a warning that the individual was not enrolled during that quarter and will view the current schedule for the individual
3	3	Alternate Flow: username or password is incorrect	N/A	I	V	User is prompted to re-enter username and password
4	4	Alternate Flow: No Network Connection	N/A	N/A	I	User views error stating that network connection required for this app.

Overlaying Schedules

Test Case ID	Scenario	Description	Condition: User is trying to overlay an allowed number of schedules	Condition: User wants to clear the overlay	Condition: User adds the same schedule multiple times	Condition: Valid credentials are stored in the app	Condition: Network connection available	Expected Result
1	1	Basic Flow: everything is normal	V	I	I	V	V	User views selected schedules in the overlay view.
2	2	Alternate Flow: User has tried to overlay too many schedules	I	I	I	V	V	User sees a warning that no more schedules can be placed in the overlay, the most recent attempt to add a schedule will be unsuccessful.
3	3	Alternate Flow: User wants to clear the overlay	V	V	I	V	V	All schedules are removed from the overlay. User is returned to the empty list of schedules in the overlay.
4	4	Alternate Flow:	V	I	V	V	V	No checks are made, the user will see the same schedule appear multiple times in the overlay.
5	5	Alternate Flow: username or password is incorrect	N/A	N/A	N/A	I	V	User is prompted to re-enter username and password.
6	6	Alternate Flow: No Network Connection	N/A	N/A	N/A	N/A	I	User views error stating that network connection required for this app.

Find Contact Information Use Case

Test Case ID	Scenario	Description	Condition: Valid credentials are stored in app	Condition: Network connection available	Condition: Has search bar selected	Condition: Selects "username" option	Condition: Types full username.	Condition:	Expected Result
1	1	Basic Flow: user selects search bar	V	V	V	V	N/A		User will be able to search
2	1	Basic Flow: username or password is incorrect	I	V	N/A	N/A	N/A		User is prompted to re-enter username and password
3	2	Alternate Flow: types only partial username	N/A	I	V	V	I		The application should list available users who match the partial username. (if any).

E-mail User Use Case

Test Case ID	Scenario	Description	Condition: User is viewing contact information	Condition: Network connection available	Condition: User has native e- mail app set up.		Expected Result
1	1	Basic Flow: User navigates to individuals contact information.	V	V	N/A		User will be able to go to users e-mail through touch.
2	1	Basic Flow: username or password is incorrect	N/A	V	N/A		User is prompted to re-enter username and password
3	2	Alternate Flow: No e- mail account set up	N/A	V	V		The OS will prompt the user to create a e- mail account.

E-mail a Schedule Use Case

Test Case ID	Scenario	Description	Condition: User is viewing a schedule	Condition: Network connection available	Condition: User has native e- mail app set up.		Expected Result
1	1	Basic Flow: User navigates to any viewable schedule	V	V	N/A		User will be able to click the “e-mail schedule” button.
2	1	Basic Flow: username or password is incorrect	N/A	V	N/A		User is prompted to re-enter username and password
3	2	Alternate Flow: No e- mail account set up	N/A	V	V		The OS will prompt the user to create a e- mail account.

Add to Favorites Use Case

Test Case ID	Scenario	Description	Condition: User has searched for a user	Condition: Network connection available	Expected Result
1	1	Basic Flow: User navigates to individuals contact information.	V	V	User will be able to hit "add to favorites"
2	1	Basic Flow: username or password is incorrect	N/A	V	User is prompted to re-enter username and password
3	2	Alternate Flow: User is already in the favorites	V	V	The application will not add the user to the favorites list.
4	2	Alternate Flow: No internet or network connection	N/A	I	The application will display a toast message and will not display any information that requires network.

View Favorites

Test Case ID	Scenario	Description	Condition: User is any page.	Condition: Network connection available		Expected Result
1	1	Basic Flow: User presses "My favorites tab"	V	V		User will view his or her favorites.
2	1	Basic Flow: username or password is incorrect	N/A	V		User is prompted to re- enter username and password
3	2	Alternate Flow: No internet connection	N/A	I		The application will display a toast message and will not display any information that requires network.

Sync Schedule Use Case

Test Case ID	Scenario	Description	Condition: User is viewing his or her schedule.	Condition: Network connection available		Expected Result
1	1	Basic Flow: User chooses to add his or her schedule to the calendar application.	V	V		The application will add the classes of the current term to the schedule.
2	1	Basic Flow: username or password is incorrect	N/A	V		User is prompted to re-enter username and password
3	2	Alternate Flow: No internet connection	N/A	I		The application will display a toast message and will not display any information that requires network.
4	2	Alternate Flow: User chooses a different term to sync.	V	V		The application will add the classes to the schedule.

View Class Roster Use Case

Test Case ID	Scenario	Description	Condition: User is viewing course information page.	Condition: Network connection available		Expected Result
1	1	Basic Flow: User navigates to course roster	V	V		User will view the course roster.
2	1	Basic Flow: username or password is incorrect	N/A	V		User is prompted to re-enter username and password
3	2	Alternate Flow: No internet connection	N/A	I		The application will display a toast message and will not display any information that requires network.

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Glossary

Git	A free and open source distributed version control system
iOS	The mobile operating system developed by Apple that runs on iPhone, iPod Touch, and iPad devices
Rose-Hulman	The number one undergraduate engineering school in the nation, and the school at which the schedule lookup app will be used
Use Case	A description of the interactions between a user and the system that leads to a useful outcome for the user

References

- iOS Developer Library Human Interface Guidelines*. (2011). Retrieved from Apple: Apple Inc. (2011)
Human Interface Guidelines
<https://developer.apple.com/library/ios/#documentation/UserExperience/Conceptual/MobileHIG/Introduction/Introduction.html>
- (2011). iPhone Mobile Lookup Survey. (K. Greenwald, Interviewer)
- Schedule Lookup*. (2011, 4). Retrieved 10 18, 2011, from www.rose-hulman.edu: <https://prodweb.rose-hulman.edu/regweb-cgi/reg-sched.pl>
- Apple Inc. (2011). *iOS 5 for Developers*. Retrieved October 11, 2011, from www.apple.com:
<http://developer.apple.com/technologies/ios5/>
- Apple Inc. (2010, 5 5). *Coding Guidelines.PDF*. Retrieved 10 26, 2011, from iOS Developer Library:
<http://developer.apple.com/library/ios/#documentation/Cocoa/Conceptual/CodingGuidelines/CodingGuidelines.pdf>
- Ekl, T., & Stokes, E. (2011, 9 21). Client Meeting. (M. Vitale, B. Knight, K. Greenwald, & A. Say, Interviewers)
- Yourdon, D. L. (2003). *Managing Software Requirements, 2nd edition, A Use Case Approach*. Addison Wesley: Pearson Education.