

## Team Six

SQS Training Website

11/14/2016

CS 499, Fall 2016

### Authors

Josh DeLong

Nick Schorr

Stephen Williams

Nathan Hunter

### SQS Contacts

Luke Robinson

Jun Yagi

### Website

[cs4996.wordpress.com](http://cs4996.wordpress.com)

# I. Analysis

## User Stories

During the maintenance phase additional user stories were added, but several older stories were also broken, per request of SQS. Additional functionality was added to allow users to register with their mobile phone number as well as their email address, in order to receive text updates. These are the user stories that have been changed or added:

### Broken Stories:

1. As a non-logged in user I should receive an error when submitting my username and password if they do not match a user in the active directory. - **Implemented, removed error message from login page.**
2. As a non-logged in user I should be able to enter an email at the subscribe page and save that email to the database. - **Implemented, user can register with the same email multiple times. No error will be given, but the same address will not actually be saved multiple times.**
3. As a non-logged in user I should be able to navigate to the home page. - **Implemented, the “Home” button on the website no longer works.**
4. As a logged in user I should be able to click the logout button and logout. - **Implemented, the logout button no longer works.**

### Added Stories:

1. As a non-logged in user I should be able to register my phone number in addition to my email address. - **Implemented, there is a phone number field on the registration page and phone numbers entered will be saved to the database.**
2. As a user I should be able to access the website on a mobile phone and view the website in a mobile-friendly format. - **Implemented, new CSS stylesheets have been added for mobile view.**

SQS also requested that a device detector be added to the project, which changes the view of the website depending on the device in use. This process occurs automatically, and does not affect any user story.

Paper Interface - No changes from Coding Assignment

## Acceptance Testing Plan

With the changes made in the maintenance phase, only a small number of new acceptance tests must be performed. The added breaks must be tested to ensure they are functioning according to the specifications, the new phone number field must be tested, and the device recognition must be tested. This should result in 7 new acceptance test cases - 4 for the broken user stories, 1 for the phone number field functionality, and 2 to determine if both the desktop and mobile device views are functional.

## II. High Level Design - No changes from Coding Assignment

## III. Detailed Design

### Updated Detailed Design

The detailed design is nearly unchanged. The website is still made with a model-view-controller design and the class diagrams for the models and controllers are the same as they were in the Architecture Design document. The only difference is that the SubscriptionController has an additional method called "subscribePhoneNumber(String): String." This is the function that handles storing a phone number entered by the user into the database and associating it with the username and email entered with it.

### Updated User Interface - No changes from Coding Assignment

### Updated Design Pattern - None used / No changes

### Quality Assurance Review

After implementing all of the breaks and new features, no defects were detected during the quality assurance review.

## IV. Implementation

### Source Code

The complete source code for the project, as well as all additions and deletions, can be found at <https://github.com/jdelong747/CS499>.

### Updated User's Manual

The user's manual is identical to the previous version, with the exception that the user can now enter their phone number as well as their email address on the registration page.

### Updated Administrator's Manual - No changes from Coding Assignment

### Code Review

After completing the implementation of the new features, a comprehensive code review of the project was held. The SubscriptionController class was changed the most during this phase, so it was reviewed more than the other sections of the source code. Here is a checklist documenting its functionality:

- ✓ Username is stored in the database
- ✓ Password is stored in the database
- ✓ Email is stored in the database
  - ✓ Same email can be re-entered with no error, is not actually saved in database
- ✓ Phone number is stored in the database
- ✓ Phone number and email are associated correctly with username

As shown, the code review determined that the SubscriptionController class is working as intended.

## V. Testing

### Acceptance Testing, Updated

Although several changes were made to the website during the maintenance phase, only one Acceptance test was altered as follows:

#	Requirement	Verification	Method	Status
1	The system shall allow users to log out of the system.	Click the login button and verify the website reverts to a non-logged-in user view.	Manual	Pass

This test was changed to:

#	Requirement	Verification	Method	Status
1	The system shall <b>not</b> allow users to log out of the system.	Pressing the logout button as a logged-in user does not end the user's session or revert to a non-logged-in view.	Manual	Pass

This reflects one of the breaks requested by SQS: that the logout button no longer functions for logged-in users. No other acceptance tests were changed.

### Unit Testing, Updated

The remainder of the additions made during the maintenance phase either change existing unit tests or add new ones. Modified tests, listed first, use the same test numbers as in the Coding Assignment document, for clarity.

#	Test Case	Pass Condition	Fail Condition	Status
4b	User attempts login with non-registered information	Allow another attempt (no error message is given)	Notification of invalid information or session is created <b>or</b> user is given access to the site	Pass

5	Logged-in user clicks the “Logout” button	Session is not deleted, user is not redirected anywhere	User is logged out, session is killed	Pass
9a	Non-logged-in user clicks homepage button	User is not redirected; nothing happens	User is redirected home	Pass
9b	Logged-in user clicks homepage button	User is not redirected; nothing happens	User is redirected home	Pass

**Table 5.2.1 - Pre-existing Unit tests modified for the Maintenance Phase**

The final 3 unit tests have been introduced with the new features added in the Maintenance phase:

#	Test Case	Pass Condition	Fail Condition	Status
1	Non-logged-in user enters their mobile phone number in the correct field on the Registration page	Phone number is saved <b>and</b> Associated with the correct username/email	Number is not saved <b>or</b> Is not correctly associated with the correct username/email	Pass
2a	Non-logged-in or logged-in user accesses the website via desktop browser	The desktop CSS stylesheet is displayed	Mobile CSS stylesheet is displayed	Pass
2b	Non-logged-in or logged-in user accesses the website via mobile browser	The mobile CSS stylesheet is displayed	Desktop CSS stylesheet is displayed	Pass

**Table 5.2.2 - Unit test for new functionality added during Maintenance Phase**

## VI. Metrics

### Changes to Code

When SQS gave us the changes they wanted to be made during the maintenance phase, we estimated that our existing codebase was flexible enough to accommodate the changes in 100-150 lines of code. Between the new phone number registration functionality, the new CSS sheets for the mobile layout, and the device detection functionality, about 100 lines of code were added to the project.

### System Complexity - No changes from Coding Assignment

### Product Size

In the Coding Assignment, there were 18 unit test cases and 12 acceptance test cases. The number of acceptance tests has remained the same, but 3 unit tests were added, bringing the total to 21. The number of user stories also grew from 12 to 14, with stories for phone number registration and mobile viewing added.

### Product Effort

The total number of hours spent on this project is as follows:

Joshua DeLong	21 hours
Stephen Williams	16 hours
Nick Schorr	17 hours
Nathaniel Hunter	14 hours
<b>Total</b>	69 hours

Developer journals can be found on the project website, <http://cs4996.wordpress.com>.