Testing Report

XENO

**Client**

**Sha**w**n Squire**

**Team 1**

Vesh Bhatt

Michael Bishoff

Edward LaFemina

Michael Lee

John Swank

2 March 2015

**1. Introduction**

Welcome to the XENO Testing Report. Testing is a vital requirement for delivering a consistent and accurate product.

**1.1 Purpose of This Document**

This document is intended for system administrators, quality assurance teams, and other users interested in reviewing the test procedure used for the development of the first iteration of this product. This report will define and analyze the testing process and describe the results.

**1.2 References**

Use cases from the System Requirements Specification (SRS) documentation.

**2. Testing Process**

**2.1 Description**

The use cases described in the SRS documentation influenced each spiral’s testing procedure. Team members were tasked with satisfying specific test conditions derived from the original use cases. Driving project development through satisfying these test conditions was a major goal accomplished during each spiral.

Further testing not described in this document, beyond the planned test conditions, also took place. This included basic unit testing and the execution of the project through multiple usage scenarios. Once the use cases were tested, a desired iteration of the final product for the second spiral was verified.

**2.1 Testing Sessions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **Location** | **Time Started** | **Time Ended** | **Performed By** | **Use Cases** |
| 3/1/2015 | Home | 04:30pm | 06:30pm | Vesh Bhatt | N/A |
| 3/4/2015 | School | 06:30 | 07:00 | Vesh Bhatt | 2,3 |
| 3/18/2015 | School | 06:30 | 08:00 | Vesh Bhatt | 4,5 |
| 4/1/2015 | School | 06:30 | 07:30 | Vesh Bhatt | 6 |
| 4/3/2015 | School | 08:00 | 09:00 | Vesh Bhatt | 7,8 |
| 4/6/2015 | School | 03:00 | 05:00 | Vesh Bhatt | 11,12 |
| 4/18/2015 | School | 06:00 | 08:00 | Vesh Bhatt | 9,10 |
| 4/26/2015 | School | 03:00 | 08:00 | Vesh Bhatt | 13 |

**2.2 Impressions of the Process**

A testing procedure focused on checking whether a use case was implemented properly by verifying the base functionality of XENO. Through the use of test conditions derived from the use cases, the requirements were tested thoroughly. These use cases created a guideline to follow throughout project development, helped separate workload, and acted as a proper tool for testing once the spiral iteration was completed.

The strongest component of the second spiral is the frontend of XENO. Through the use of simple html and css, the basic structure of the website is showcased. Because of the static nature of the files testing was conducted swiftly and further testing will be conducted when the frontend and backend database are integrated together.

See Code Inspection report for details of areas of code unlikely and likely to contain flaws.

**3. Test Results**

**3.1 Testing Suite**

|  |  |
| --- | --- |
| **Use Case** | 1 - Search Car Database |
| **Valid SQL Statements** | TBD |
| **Equivalent Valid Web Searches** | TBD |
| **Invalid SQL Statements** | TBD |
| **Equivalent Invalid Web Searches** | TBD |
| **Purpose** | TBD |
| **Expected Results for Valid Web Search** | TBD |
| **Expected Results for Invalid Web Search** | TBD |
| **Boundary Conditions** | TBD |

|  |  |
| --- | --- |
| **Use Case** | 2 - Log into Website |
| **Valid Action** | User types in correct credentials and clicks the “LOGIN” button. |
| **Invalid Action** | User types in incorrect credentials and clicks the “LOGIN” button. |
| **Purpose** | To test the ability to login to the website. |
| **Expected Results for Valid Action** | User’s profile and preferences are loaded into site. |
| **Expected Results for Invalid Action** | Display message and ask for credentials again. |
| **Boundary Conditions** | Invalid “Username” and “Password” results in error message. |

|  |  |
| --- | --- |
| **Use Case** | 3 - View User Profile |
| **Valid Action** | User clicks on their own profile icon. |
| **Invalid Action** | User clicks on someone elses profile icon. |
| **Purpose** | To test the ability for a user to view their own profile. |
| **Expected Results for Valid Action** | User is validated and profile information displayed. |
| **Expected Results for Invalid Action** | Website displays an error message that states user does not have permission. |
| **Boundary Conditions** | If user profile information was not previously entered, user will be prompted to enter information. |

|  |  |
| --- | --- |
| **Use Case** | 4 - Create Account |
| **Valid Action** | Person clicks “Create New Account”, Person enters all applicable information, Email is sent to validate email address, Email is validated and account created, User is directed to logon screen. |
| **Invalid Action** | Person enters invalid information or does not validate email. |
| **Purpose** | To test the ability for a person to create an account. |
| **Expected Results for Valid Action** | Create Account page is displayed, information meets criteria, email is validated, user account is created, and user is redirected to logon screen. |
| **Expected Results for Invalid Action** | Person is re-prompted to reenter information or resend validation email. |
| **Boundary Conditions** | If email isn’t validated, a user account will not be created. |

|  |  |
| --- | --- |
| **Use Case** | 5 - Add Car |
| **Valid Action** | Admin navigates to “Add Car” page, Enters any applicable details, and clicks “Add” button. |
| **Invalid Action** | Admin enters applicable details that do not meet criteria and clicks “Add” button. |
| **Purpose** | To test the ability for an Admin to add a car to the database. |
| **Expected Results for Valid Action** | Data sent to database and stored, prompt displayed stating car was added. |
| **Expected Results for Invalid Action** | Admin is re-prompted to reenter information. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 6 - Show/Hide/Remove Car |
| **Valid Action** | Admin searches for car, selects either “Remove”, “Hide”, or “Show”, database entry for car updates. |
| **Invalid Action** | Admin searches for invalid car, or does not select “Remove”, “Hide”, or “Show”. |
| **Purpose** | To test the ability for an Admin to show/hide/remove a car. |
| **Expected Results for Valid Action** | The car is removed from the system or hidden/shown from ordinary users’ view. |
| **Expected Results for Invalid Action** | The admin is prompted to search for another car, or select “Remove”, “Hide”, or “Show”,, and the database entry does not update. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 7 - Account Creation Management |
| **Valid Action** | Admin selects “Approve” or “Remove” from list of newly created accounts and clicks “Apply” button. |
| **Invalid Action** | Admin does not select “Approve” or “Remove” from list of newly created accounts and clicks “Apply” button. |
| **Purpose** | To test the ability for an Admin to approve the creation of a User or Maintenance Account. |
| **Expected Results for Valid Action** | A user or maintenance account is marked as approved in the database or it is removed from the database. |
| **Expected Results for Invalid Action** | The information for a user or maintenance account does not change in the database. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 8 - Suspend/Ban Account |
| **Valid Action** | Admin selects “Suspend” or “Ban” from list of accounts and clicks “Apply” button. |
| **Invalid Action** | Admin does not select “Suspend” or “Ban” from list of accounts and clicks “Apply” button. |
| **Purpose** | To test the ability for an Admin to suspend or ban an account. |
| **Expected Results for Valid Action** | An account is marked as suspended or banned in the database, and a notification is sent to the account holder. |
| **Expected Results for Invalid Action** | The information for an account does not change in the database. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 9 - Maintenance Disable/Enable Car |
| **Valid Action** | Maintenance selects a car, checks “In Maintenance” checkbox, and clicks “Apply” button. |
| **Invalid Action** | Maintenance selects a car, does not check “In Maintenance” checkbox, and clicks “Apply” button. |
| **Purpose** | To test the ability for maintenance to disable a car if it needs to be worked on or enable it when it is ready. |
| **Expected Results for Valid Action** | The car is marked as in maintenance in the database and a prompt is displayed showing the car is in maintenance. |
| **Expected Results for Invalid Action** | The car is not marked as in maintenance in the database. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 10 - Check in Car |
| **Valid Action** | Maintenance selects car, checks “Check in” check box and clicks “Apply” button. |
| **Invalid Action** | Maintenance selects car, does not check “Check in” check box and clicks “Apply” button. |
| **Purpose** | To test the ability for maintenance to check in a car when a user brings it back. |
| **Expected Results for Valid Action** | The car is marked as checked in the database and a prompt is displayed showing the car is in now available for rental. |
| **Expected Results for Invalid Action** | The car is not marked as checked in the database. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 11 - View Maintenance log |
| **Valid Action** | Admin or maintenance selects a car on “Maintenance Log” page. |
| **Invalid Action** | Admin or maintenance does not select a car on “Maintenance Log” page. |
| **Purpose** | To test the ability for Admins or maintenance to see the maintenance logs for each car. |
| **Expected Results for Valid Action** | The maintenance records for a car is shown. |
| **Expected Results for Invalid Action** | The maintenance records for a car are not shown and the page remains the same. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 12 - Reserve Car |
| **Valid Action** | User selects car, browses for and selects date on calendar, and clicks “Reserve” button. |
| **Invalid Action** | User does not select car, or browses for and selects date on calendar for which the car is already booked, and clicks “Reserve” button. |
| **Purpose** | To test the ability for users to reserve a car for a day and check it out. |
| **Expected Results for Valid Action** | A reservation for the car is made and a prompt is displayed confirming the reservation. |
| **Expected Results for Invalid Action** | User is prompted to select another car or another date on the calendar. |
| **Boundary Conditions** | If not logged in as Admin, prompt for login. |

|  |  |
| --- | --- |
| **Use Case** | 13 - Car Rental Queuing |
| **Valid Action** | N/A on user side. |
| **Invalid Action** | N/A on user side |
| **Purpose** | To test the ability of the queuing system to address users in the queue. |
| **Expected Results for Valid Action** | Users are removed from the queue as cars become available. |
| **Expected Results for Invalid Action** | N/A |
| **Boundary Conditions** | Queuing system runs every hour to check for available cars. |

**3.2 Test Results**

The results for testing are outlined in the tables below.

**3.2.1 Use Case:**

|  |  |
| --- | --- |
| **Use Case #** | **Test Result** |
| 1 | Expected Results for Valid Action (see table above). |
| 2 | Expected Results for Valid Action (see table above). |
| 3 | Expected Results for Valid Action (see table above). |
| 4 | Expected Results for Valid Action (see table above). |
| 5 | Expected Results for Valid Action (see table above). |
| 6 | Expected Results for Valid Action (see table above). |
| 7 | Expected Results for Valid Action (see table above). |
| 8 | Expected Results for Valid Action (see table above). |
| 9 | Expected Results for Valid Action (see table above). |
| 10 | Expected Results for Valid Action (see table above). |
| 11 | Expected Results for Valid Action (see table above). |
| 12 | Expected Results for Valid Action (see table above). |
| 13 | Expected Results for Valid Action (see table above). |

**4. Appendix A – Team Review Sign-off**

As of 4/29/2015, all group members of XENO have reviewed the Testing Report document and all have agreed the content and format of this document is correct. Any disagreements of concerns are addressed in team comments below.

**Team: XENO**

Name: Vesh Bhatt

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: Michael Bishoff

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: Edward LaFemina

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: Michael Lee

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: John Swank

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Comments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**5. Appendix B – Document Contributions**

Vesh Bhatt: As implementation and testing leader, was responsible for reporting the test results. Estimated percent of work is about 80%.

Michael Bishoff: Filled in details for some tests. Estimated percent of work is about 5%

Edward LaFemina: Filled in details for some tests. Estimated percent of work is about 5%.

Michael Lee: Filled in details for some tests. Estimated percent of work is about 5%.

John Swank: Contributed to formatting and final proofreading. Estimated percent of work is about 5%.