Project: [California Marketing Website](https://qasvus.wixsite.com/ca-marketing)

TEST PLAN

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5. ***Introduction***

We have created the Test Plan to ensure the quality of the California marketing (<https://qasvus.wixsite.com/ca-marketing>) website. Test Plan helps our team talk and explains how we test everything from logging in to buying things on the website. This document includes the strategies and methodologies for functional end-to-end tests. It includes sub-tasks for each test, testing types, environments, and tools and provides test cases with expected and actual results.

1. ***Scope***

The document primarily focuses on the following testing areas:

1. **GUI Testing**: Evaluating the graphical user interface of the application.
2. **Unit Testing**: Testing individual units or components of the software.
3. **Functional Testing**: Assessing the system's functionality, including positive and negative scenarios.
4. **Manual Testing**: Hands-on testing executed by testers.
5. **Automation Testing**: Testing conducted through automated test scripts.
6. **API Testing**: Evaluating the application's APIs.
7. **Performance Automation Testing**: Using automated tools to assess the system's performance.
8. **Security Automation Testing**: Testing the system's security features with automated tools.
9. ***Main Test Plan***: ***California Marketing Website Testing***
   1. ***Website Manual Testing***

Perform manual testing for the User's Personal Account Address Menu using these testing methods:

1. **GUI Testing:** This means checking how the website looks and feels. We're looking for errors, spelling mistakes, and if it follows design rules.
2. **Exploratory Testing:** Here, we explore the website without predefined test steps. We're trying things out as we go.
3. **Functional Positive Testing:** We want to ensure the website works correctly when we do things correctly.
4. **Functional Negative Testing:** We're also testing what happens when we do things incorrectly or give the website the wrong information.
5. **Functional Ad-hoc Testing:** This informal testing is where we try to find any unexpected problems on the website.

***For our testing, we are using the following environment***:

* **Hardware:** Laptop
* **Operating System:** Windows 11
* **Browsers (latest versions):**
  + Google Chrome
  + Firefox Mozilla
  + Microsoft Edge

We have also listed the results of some test cases in the table below, along with the browsers used and whether the tests passed or failed. These test cases cover both positive and negative scenarios.

***Positive test***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TC ID: | Test Title | Step Description | Expected Result | Actual  Result | Status Pass/Fail |
| 1 | 2 | 3 | 4 | 5 | 6 |
| ***Positive test*** | | | | | |
| TC 001 | Display all saved addresses and delete them if they are present. | 1. Open the website and navigate to "My Addresses." 2. Verify address presence. 3. Confirm the presence of a "Remove" button | All the current addresses are visible and can be removed. | All addresses are displayed and removable. | PASS |
| TC 002 | Enter the first new address with the correct values. | 1. Click on the 'Add New Address' button. 2. Enter the required address details. 3. Click on the 'Add Address' button. 4. Verify that the address has been successfully added to the list. | The first new address has been added to the list. | The first new address added to the list. | PASS |
| TC 003 | Enter the second new address with the correct values. | 1. Click on the 'Add New Address' button. 2. Enter the required address details. 3. Click on the 'Add Address' button. 4. Verify that the second address has been successfully added to the list. | The second new address has been added to the list. | The second new address added to the list. | PASS |
| TC 004 | Make the Second address the default. | 1. Find the second address. 2. Click "Make is my default" near the second address. 3. Verify that the “Default Address" marked is next to it. | The second address has been set up as default. | The second address is set up as default. | PASS |
| TC 005 | Remove the Second Address. | 1. Find the second address. 2. Click "Remove." 3. Confirm with "Yes." 4. Verify the address is removed. | The second address has been removed. | The second address is removed | PASS |
| ***Negative test*** | | | | | |
| TC 006 | Address Entry Validation: Ensure First Names Are Non-Numeric | 1. Access the address entry form. 2. Enter a numeric value (123) in the "First Name" field. 3. Attempt to add an address. | No address should be added when attempting to save. | The address was added despite the attempt to save invalid data. | FAIL |
| TC 007 | Address Entry Validation: Ensure First Names Don't Contain Special Characters | 1. Access the address entry form. 2. Enter special characters (e.g., @#$%) in the "First Name" field. 3. Attempt to add an address. | No address should be added when attempting to save. | The address was added despite the attempt to save invalid data. | FAIL |
| TC 008 | Address Entry Validation: Empty First Name Handling | 1. Access the address form. 2. Enter an empty first name. 3. Attempt to add an address. | "Please enter first name" message is displayed, and a new address is not added to the list. | "Please enter first name" message was displayed, and a new address wasn't added to the list. | PASS |
| TC 009 | Address Entry Validation: Informal First Name Handling (Repetitive Letters) | 1. Access the address form. 2. Input an informal first name with repeated letters (e.g., "Joohhnnn") in the "First Name" field. 3. Attempt to add an address. | "Please enter first name" message is displayed, and a new address is not added to the list. | The address was added despite the attempt to save invalid data. | FAIL |

***Testing Tools Used:***

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | Microsoft Word, Microsoft Excel, JIRA |
| Test case tracking | Microsoft Word, Microsoft Excel, JIRA |
| Test case execution | Manual |
| Test case management | Microsoft Excel, JIRA |
| Test reporting | Microsoft Excel, JIRA |

* 1. ***Website Automation Testing***

Website automation tests have been created using the Selenium Python UnitTest framework based on functional manual test cases. These tests are executed to verify the functionality of the User's Personal Account Address Menu.

***Environment Support:***

* **Hardware:** Laptop
* **Operating System:** Windows 11
* **Browsers (latest versions):**
  + Google Chrome
  + Firefox Mozilla
  + Microsoft Edge

***The following test cases cover automated tests:  
(Test results are provided in the table below.)***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TC ID: | Test Title | Step Description | Expected Result | Actual  Result | Status Pass/Fail |
| 1 | 2 | 3 | 4 | 5 | 6 |
| ***Positive test*** | | | | | |
| TC 001 | Display all saved addresses and delete them if they are present. | 1. Open the website and navigate to "My Addresses." 2. Verify address presence. 3. Confirm the presence of a "Remove" button | All the current addresses are visible and can be removed. | All addresses are displayed and removable. | PASS |
| TC 002 | Enter the first new address with the correct values. | 1. Click on the 'Add New Address' button. 2. Enter the required address details. 3. Click on the 'Add Address' button. 4. Verify that the address has been successfully added to the list. | The first new address has been added to the list. | The first new address added to the list. | PASS |
| TC 003 | Enter the second new address with the correct values. | 1. Click on the 'Add New Address' button. 2. Enter the required address details. 3. Click on the 'Add Address' button. 4. Verify that the second address has been successfully added to the list. | The second new address has been added to the list. | The second new address added to the list. | PASS |
| TC 004 | Make the Second address the default. | 1. Find the second address. 2. Click "Make is my default" near the second address. 3. Verify that the “Default Address" marked is next to it. | The second address has been set up as default. | The second address is set up as default. | PASS |
| TC 005 | Remove the Second Address. | 1. Find the second address. 2. Click "Remove." 3. Confirm with "Yes." 4. Verify the address is removed. | The second address has been removed. | The second address is removed | PASS |
| ***Negative test*** | | | | | |
| TC 006 | Address Entry Validation: Ensure First Names Are Non-Numeric | 1. Access the address entry form. 2. Enter a numeric value (123) in the "First Name" field. 3. Attempt to add an address. | No address should be added when attempting to save. | The address was added despite the attempt to save invalid data. | FAIL |
| TC 007 | Address Entry Validation: Ensure First Names Don't Contain Special Characters | 1. Access the address entry form. 2. Enter special characters (e.g., @#$%) in the "First Name" field. 3. Attempt to add an address. | No address should be added when attempting to save. | The address was added despite the attempt to save invalid data. | FAIL |
| TC 008 | Address Entry Validation: Empty First Name Handling | 1. Access the address form. 2. Enter an empty first name. 3. Attempt to add an address. | "Please enter first name" message is displayed, and a new address is not added to the list. | "Please enter first name" message was displayed, and a new address wasn't added to the list. | PASS |
| TC 009 | Address Entry Validation: Informal First Name Handling (Repetitive Letters) | 1. Access the address form. 2. Input an informal first name with repeated letters (e.g., "Joohhnnn") in the "First Name" field. 3. Attempt to add an address. | "Please enter first name" message is displayed, and a new address is not added to the list. | The address was added despite the attempt to save invalid data. | FAIL |

***Testing Tools used:***

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test Case Creation | PyCharm, Selenium |
| Test Case Tracking | PyCharm, Browsers |
| Test Case Execution | Automation |
| Test Case Management | PyCharm |
| Test Reporting | HTML reports, Allure reports |

***We also run additional automation tests using the cloud platform “BrowserStack.”***

***Environment Support:***

* **Hardware:** Laptop
* **Operating System:** Windows 11
* **Browsers (latest versions):**
  + Google Chrome
  + Microsoft Edge

***Testing Tools used:***

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test Case Creation | PyCharm, Selenium |
| Test Case Tracking | Browserstack.com |
| Test Case Execution | Automation |
| Test Case Management | PyCharm |
| Test Reporting | Video files (mp4) |

The test results align with those obtained on a local device.

* 1. ***Website API Testing***

API tests are conducted to assess the developed APIs' functionality, performance, reliability, and security to ensure they meet website expectations.

***Environment Support:***

* **Hardware:** Laptop
* **Operating System:** Windows 11
* **Browsers (latest versions):**
  + Google Chrome
  + Firefox Mozilla
  + Microsoft Edge

***The following test cases cover API tests:  
(Test results are provided in the table below.)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TC ID: | Request / Test Title | Expected Result | Actual  Result | Status Pass/Fail |
| 1 | 2 | 3 | 4 | 5 |
| ***Positive test*** | | | | |
| TC 1 | POST / New address with correct values is entered. | A new address has been added. The status code is 200 | A new address was added. The status code is 200 | PASS |
| TC 2 | POST / Set up a new address as the default | A new address is set as the default.  The status code is 200 | A new address is set as default.  The status code is 200 | PASS |
| TC 3 | GET / Show all addresses | The list of all addresses is shown.  The status code is 200 | The list of all addresses is shown.  The status code is 200 | PASS |
| TC 4 | GET / Show default address | The default address is shown.  The status code is 200 | The default address is shown.  The status code is 200 | PASS |
| TC 5 | PATCH / Modify new address info cells. | The new address has been modified.  The status code is 200 | The new address has been modified.  The status code is 200 | PASS |
| TC 6 | GET / Show modify address | Modify address is showing.  The status code is 200 | Modify address is showing.  The status code is 200 | PASS |
| TC 7 | DEL / Delete new address | The new address has been deleted.  The status code is 200 | The new address has been deleted.  The status code is 200 | PASS |
| TC 8 | DEL / Delete new address 2nd time | The new address has already been removed.  The status code is 400 | The new address has already been removed.  The status code is 400 | PASS |
| TC 9 | GET / Check deleted new address | The deleted address is not on the list.  The status code is 400 | The deleted address is not on the list.  The status code is 400 | PASS |
| ***Negative test*** | | | | |
| TC 10 | POST / Address with incorrect First Name is entered (numbers) | Address with Incorrect First Name is not added.  The status code is 400 | An address with an Incorrect First Name is added.  The status code is 200 | FAIL |
| TC 11 | GET / Check entered address with incorrect First Name (numbers) | The address is not found  The status code is 404 | The address is on the list.  The status code is 200 | FAIL |
| TC 12 | DEL / Delete entered address with incorrect First Name (numbers) | The address is not found.  The status code is 404 | The address is deleted.  The status code is 200 | FAIL |
| TC 13 | POST / Address with incorrect First Name is entered (special characters) | Address with Incorrect First Name is not added.  The status code is 400 | An address with an Incorrect First Name is added.  The status code is 200 | FAIL |
| TC 14 | GET / Check entered address with incorrect First Name (special characters) | The address is not found.  The status code is 404 | The address is on the list.  The status code is 200 | FAIL |
| TC 15 | DEL / Delete entered address with incorrect First Name (special characters) | The address is not found.  The status code is 404 | The address is deleted.  The status code is 200 | FAIL |
| TC 16 | POST / Address with incorrect First Name is entered (empty) | Address with Incorrect First Name is not added.  The status code is 400 | An address with an Incorrect First Name is added.  The status code is 200 | FAIL |
| TC 17 | GET / Check entered address with incorrect First Name (empty) | The address is not found.  The status code is 404 | The address is on the list.  The status code is 200 | FAIL |
| TC 18 | DEL / Delete entered address with incorrect First Name (empty) | The address is not found.  The status code is 404 | The address is deleted.  The status code is 200 | FAIL |
| TC 19 | POST / Address with informal First Name is entered (a lot of the same letters) | Address with informal First Name is not added.  The status code is 400 | Address with informal First Name is added.  The status code is 200 | FAIL |
| TC 20 | GET / Check entered address with informal First Name (a lot of the same letters) | The address is not found.  The status code is 404 | The address is on the list.  The status code is 200 | FAIL |
| TC 21 | DEL / Delete entered address with informal First Name (a lot of the same letters) | The address is not found.  The status code is 404 | The address is deleted.  The status code is 200 | FAIL |

***Testing Tools used:***

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test Case Creation | Postman, Chrome DevTools |
| Test Case Tracking | Postman |
| Test Case Execution | Automation |
| Test Case Management | Postman |
| Test Reporting | Screenshots |

* 1. ***Website Automation Performance Testing***

Performance automation tests are conducted to measure the tested website's speed, responsiveness, and stability. These tests are performed in incognito environments, and reports are generated after testing.

***Testing Tools used:***

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test Case Creation | Google Lighthouse, GTMetrix, BrowserStack-SpeedLab |
| Test Case Tracking | Google Lighthouse, GTMetrix, BrowserStack-SpeedLab |
| Test Case Execution | Automation |
| Test Case Management | Jira |
| Test Reporting | Text (.txt), HTML (.html), PDF (.pdf) files |

* 1. ***Website Automation Security Testing***

Security automation tests are conducted to identify potential flaws or weaknesses in software and websites. The testing focuses on assessing whether the application is designed and configured correctly. These tests are also executed in incognito environments, and reports are generated after testing.

***Testing Tools used:***

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test Case Creation | Mozilla Observatory, Snyk |
| Test Case Tracking | Mozilla Observatory, Snyk |
| Test Case Execution | Automation |
| Test Case Management | Jira |
| Test Reporting | Text (.txt), HTML (.html), PDF (.pdf) files |