Name: Martin Walter Ampah
Role: QA Automation Engineer
Company: Mozzaik365

Technical Test: Mozzaik365

This technical document seeks to detail out the approach, strategy and thought process I went through to complete the technical automation test. It outlines the test objectives, processes and resources used for testing sections.

Objective: To write automated test cases for an online shop to test the core functionality of the site provided. I was to do this by compiling a list of several testable user flows, cases, or scenarios.

This test was to be done using the following user details with their respective descriptions:

User Description

1. standard_user: The site should work as expected for this user.
2. locked_out_user: User is locked out and should not be able to log in.
3. problem_user: Images are not loading for this user.
4. performance_glitch_user: This user has high loading times. Does the site still work as expected?

Using Cypress with JavaScript, the tests scenarios and test cases (both negative and positive) were implemented by Behavior Driven Development (BDD) Cucumber framework utilized with Gherkin Syntax. Gherkin is Cucumber's language parser, which allows software behaviours to be specified in a logical language that people can understand using certain keywords.

1) StandardUser
Run the StandardUser.feature file in Cypress using the following user flow:

Scenario: Standard_user Test Flow
Given I land on the shop login page and Login successfully :
(To test sign in/ login functionality)
When I sort the items and I click the cart after adding items add items to cart:
(To test filtering, adding to cart and cart items listing functionality)
And I enter valid information:
(To test functionality of the input fields)
Then Validate the total prices and verify Thank you message :
(To test the total sum logic and the Success message at the end of the purchase process)

2) LockedUser
Run the LockedUser.feature file in Cypress using the following user flow:

Scenario: Locked_user Test Flow
Given I land on the shop login page successfully:
When I enter my details in the fields provided and click the login button:
(To test sign in/ login functionality)

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Then Validate the error messages:
(To verify if the appriopriate error message is displayed)

3) ProblemUser
Run the ProblemUser.feature file in Cypress using the following user flow:

Scenario: Problem_user Test Flow
Given I land on the shop login page and Login successfully:
(To test sign in/ login functionality)
When I sort the items and I click the cart after adding items add items to cart:
(To test filtering, adding to cart and cart items listing functionality)
Then I attempt to enter valid information details:
(To test functionality of the input fields)

4) PerformaceGUser
Run the PerformaceGUser.feature file in Cypress using the following user flow:

Scenario: ProblemG_user Test Flow
Given I land on the shop login page and Login successfully:
(To test sign in/ login functionality)
When I sort the items and I click the cart after adding items add items to cart:
(To test filtering, adding to cart and cart items listing functionality)
And I enter valid information
Then Validate the total prices and verify Thank you message:
(To test the total sum logic and the Success message at the end of the purchase process)

Results:

The results of the test runs along with some analytics can be viewed via the link below:
Cypress Project Dashboard

- As expected, the test run with the slowest time was with the Performace Glitch User. This is mainly due to the relatively long periods it took for the pages and its elements to completely load into view.
- In addition, the test run with the most number of failed test cases was with the Problem User. The failures occurred at varying point including:
  1) The Filtering feature not working as expected.
  2) The proper images of the items not loading with the page.
  3) Some items not capable of being selected for purchase
  4) Some input fields on the “Your information” page not being able to accept data entries. This prevents users from visiting the final checkout screen.

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Recommendations for Improvements of the Online Shop

I would recommend the following improvements to be made to the online shop to ensure its efficiency and thorough functionality everytime.

1) A CI such as Jenkins or GitLab should be implemented as part of the software development lifecycle to ensure the delivery of code faster, safer, and more reliably.

2) Parallel testing to allow tests to run concurrently on different environments, devices, or browser setups, significantly reducing the overall test execution time.

2) The provided input fields should have alert/error messages if the following was noticed:

- Leading or trailing spaces were recognized with the entry data
- Special characteers were recognized with the entry data
- If Name fields accept numeric content.