

Project: Testing Core Functionalities of an E-commerce Website

Understanding Requirements :

- **Login and Registration**
 - Users should be able to create an account by providing an email and password.
 - Registered users should be able to log in with valid credentials.
- **Product Search**
 - Users should be able to easily find products using search functionality.
- **Add to Cart**
 - Users should be able to add products to their cart.
 - The cart should display a list of added products, including details such as product name, quantity, and price.
- **Checkout Process**
 - Users should be able to complete an order and make a payment.

Preparation :

- **Website Under Test:** <https://demo.opencart.com/en-gb?route=common/home>
- **Test Browser:** Chrome
- **Test Management Tool:** Google Sheets

Test case design:

Login test:

TC001	Positive test
Test goal	Enter the correct account and password
Precondition	The user has registered
Test steps	<ol style="list-style-type: none">1. Open the login page.2. Enter a valid username and password.3. Click the "Login" button.

Expected result	Login is successful and jumps to the user's homepage.
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TC002	Abnormal test
Test goal	Enter the wrong account and password
Precondition	None
Test steps	<ol style="list-style-type: none"> 1. Open the login page. 2. Enter the wrong username and password. 3. Click the "Login" button.
Expected result	Login failed, prompt "Username or password is wrong".

TC003	Abnormal test
Test goal	Enter an empty username and password
Precondition	None
Test steps	<ol style="list-style-type: none"> 1. Open the login page. 2. Enter an empty username and password. 3. Click the "Login" button.
Expected result	Login failed, prompt "Username and password cannot be empty".

TC004	Boundary test
Test goal	Enter the longest username and password
Precondition	The maximum input length supported by the system
Test steps	<ol style="list-style-type: none"> 1. Open the login page. 2. Enter the longest username and password. 3. Click the "Login" button.
Expected result	If the input length is legal: Login is successful and jump to the user's homepage. If the input length exceeds the limit: prompt "Username or password input is too long, please check".

Product Search:

TC001	Positive test
Test goal	Search for products by keywords
Precondition	There are related products on the website

Test steps	<ol style="list-style-type: none"> 1. Open the website homepage. 2. Enter the product name. 3. Click the "Search" button.
Expected result	Display a list of products related to the keyword.

TC002	Abnormal test
Test goal	Search for non-existent products
Precondition	There are no related products on the website
Test steps	<ol style="list-style-type: none"> 1. Open the website homepage. 2. Enter the non-existent product name. 3. Click the "Search" button.
Expected result	Display the prompt "No related products found".

Add to Cart :

TC001	Positive test
Test goal	Add products to the shopping cart
Precondition	The user has registered
Test steps	<ol style="list-style-type: none"> 1. Open the product browsing page. 2. Click the "Add to Cart" button of the product.
Expected result	The product is successfully added to the shopping cart, and the number of items in the shopping cart increases.

Checkout Process :

TC001	Positive test
Test goal	Successful payment
Precondition	User selects a valid payment method
Test steps	<ol style="list-style-type: none"> 1. Submit the order and select online payment. 2. Enter valid payment information. 3. Click the "Confirm payment" button.
Expected result	Payment is successful and the order number is generated.

TC002	Abnormal test
Test goal	Failed payment

Precondition	User selects an invalid payment method
Test steps	<ol style="list-style-type: none"> 1. Submit the order and select online payment. 2. Enter invalid payment information. 3. Click the "Confirm payment" button.
Expected result	Payment failed, prompt "Invalid payment method, please check and try again".

Test Execution

Login Tests:

TC001	
Actual Result	Login successful and redirected to the user homepage.
Comparison with Expected Result	Matches.
Status	Passed

TC002	
Actual Result	Login failed with an error message.
Comparison with Expected Result	Matches.
Status	Passed.

TC003	
Actual Result	Login failed with an error message.
Comparison with Expected Result	Matches.
Status	Passed.

TC004	
Actual Result	Login failed, but the system allows unlimited input length for username and password.
Comparison with Expected Result	Does not fully match.
Status	Failed (Bug: Input validation missing for max length).

Product Search:

TC001	
Actual Result	Displays a list of products matching the keyword.
Comparison with Expected Result	Matches.
Status	Passed.

TC002	
Actual Result	Displays a message indicating that no products were found.
Comparison with Expected Result	Matches.
Status	Passed.

Add to Cart:

TC001	
Actual Result	Product successfully added to the cart, and the cart quantity increased.
Comparison with Expected Result	Matches.
Status	Passed.

Checkout Process:

TC001	
Actual Result	Payment failed; no payment method could be selected.
Comparison with Expected Result	Does not match.
Status	Failed (Bug: Payment method configuration issue).

TC002	
Actual Result	Payment failed; no payment method could be selected.
Comparison with Expected Result	Does not match.
Status	Failed (Bug: Payment method configuration issue).

Test Report

Login Tests

Summary: Verify the login functionality.

Issue List: No functional issues. All test case results matched expectations.

Issue Description: No issues were found during testing. All actual results aligned with expected results. No system anomalies or defects detected.

Reproduction Steps:

- Open the webpage using Chrome browser.
- Navigate to the login page.
- Enter the username and password.

Expected vs Actual Results: All actual results matched expected outcomes.

Priority: None.

Recommendations: Add more user feedback messages, such as displaying specific feedback for successful or failed login attempts (e.g., "Welcome, Username" or "Invalid username/password").

Product Search

Summary: Verify the product search functionality.

Issue List: No functional issues. All test case results matched expectations.

Issue Description: No issues were found during testing. All actual results aligned with expected results. No system anomalies or defects detected.

Reproduction Steps:

- Open the webpage using Chrome browser.
- Log in with a valid user account.
- Search for a relevant product.

Expected vs Actual Results: All actual results matched expected outcomes.

Priority: None.

Recommendations: Improve search experience by implementing fuzzy search and automatic correction for spelling errors.

Add to Cart

Summary: Verify the complete process of adding products to the cart and placing an order.

Issue List: No functional issues. Actual results matched expectations.

Issue Description: No issues were found during testing. All actual results aligned with expected results. No system anomalies or defects detected.

Reproduction Steps:

- Open the webpage using Chrome browser.
- Log in with a valid user account.
- Search for a relevant product.
- Add the product to the shopping cart.

Expected vs Actual Results: All actual results matched expected outcomes.

Priority: None.

Recommendations: Enhance the shopping cart page by including product images and stock availability indicators to improve user experience.

Payment Functionality

Summary: Verify the correctness and security of the payment process.

Issue List: The payment method selection is unavailable, preventing the completion of the payment process.

Issue Description: Users are unable to select a payment method, causing the payment process to halt.

Reproduction Steps:

- Open the webpage using Chrome browser.
- Log in with a valid user account.
- Search for a relevant product.
- Add the product to the shopping cart.
- Proceed to checkout.
- Enter the shipping address and payment information.

Expected vs Actual Results: The payment method selection is empty, and the user cannot proceed.

Priority: High (critical issue impacting order completion).

Recommendations:

Ensure the payment method selection includes options (e.g., credit card, PayPal).

Validate the logic of the payment page to ensure all required elements load correctly.

Provide an error message if no payment method is available, guiding the user to contact support or retry later.