Report Generation	
Test name	**Summary**
Login/Logout:	**Login and Logout Test:** Validates successful login with correct credentials, followed by a logout action. Confirms URL redirection upon success. Invalid Email Test: Tests login with an invalid email format, verifying that an error message appears as expected. **Invalid Password Test:** Attempts login with a correct email but incorrect password, checking for a specific warning message. **Empty Password Test**: Checks system response when the email field is filled, but the password field is empty. **Empty Email Test:** Attempts login with a filled password field but empty email field, expecting an error notification. **Special Characters Test:** Verifies login behavior when special characters are used in both email and password fields. **SQL Injection Attempt:** Simulates a SQL injection attempt in both fields, checking for error messages to ensure input validation.
OpenCart Checkout Tests	Testing when you login to checkout, including had account and guest, special characters, invalid email, empty requirements…
Navigation Tests	Testing when you change page in navigation…
Register Tests	Testing when you register including special character, invalid email, empty requirement,…

Responsive Tests	Testing when you change size of website, such as "Desktop": (1200, 800),
	  "Tablet": (768, 1024),
	  "Mobile": (375, 667)

Search Tests	Testing when you search product, including special character, lower and upper character, empty fields..
Add_to_cart Tests	Testing when you add to cart product, including add one product to cart, add many products, add vary products to cart…

Test add_to_cart

Test Case ID	Description	Steps	Expected Result
TC001	Add single product to cart	1. Navigate to OpenCart homepage. 2. Wait for "Add to Cart" button to be clickable. 3. Scroll to the "Add to Cart" button of the second product. 4. Click "Add to Cart". 5. Check for success message.	Success message is displayed, and it contains the product name "iPhone".
TC002	Add product twice to cart	1. Navigate to the MacBook product page. 2. Wait for "Add to Cart" button to be clickable. 3. Click "Add to Cart". 4. Wait, then click "Add to Cart" again. 5. Open cart and verify product names and quantities.	Cart contains "MacBook" with quantity 2.
TC003	Add different products to cart	1. Navigate to OpenCart homepage. 2. Wait for "Add to Cart" button of second product (iPhone) to be clickable. 3. Scroll to and click "Add to Cart" for iPhone. 4. Navigate to MacBook product page and click "Add to Cart". 5. Open cart.	Cart contains both "iPhone" and "MacBook", each with quantity 1.

Test Checkout_guest

Test Case ID	Description	Steps	Expected Result
TC001	Test checkout with guest account	1. Navigate to the product page with a valid product ID. 2. Add the product to the cart. 3. Go to the cart page. 4. Click the checkout button. 5. Choose guest account. 6. Fill in the customer details. 7. Select shipping method. 8. Select payment method. 9. Confirm the order.	The order is successfully placed, and the confirmation message "Your order has been placed!" is displayed.
TC002	Test guest account with empty required input	1. Open product page with ID 43. 2. Add the product to the cart. 3. Navigate to the cart. 4. Click the checkout button. 5. Select guest account option. 6. Click continue without filling in required fields.	An error message is displayed: "Warning: First Name must be between 1 and 32 characters!"
TC003	Test guest account with lower boundary input	1. Open product page with ID 43. 2. Add the product to the cart. 3. Navigate to the	Error messages are displayed indicating the input data does not meet the required criteria for fields like

Test Case ID		Test Steps	Expected Result
		cart. 4. Click the checkout button. 5. Enter first name with 1 character. 6. Enter last name with 1 character. 7. Enter email with a short address. 8. Enter telephone with a short number. 9. Click the confirm order button.	first name, last name, email, and telephone.
TC004	Test guest account with upper boundary input	1. Open product page with ID 43. 2. Add the product to the cart. 3. Navigate to the cart. 4. Click the checkout button. 5. Enter first name and last name with maximum length (32 characters). 6. Enter email, company, address, city, postcode, country, and region with valid values. 7. Complete shipping and payment methods. 8. Click the confirm button.	The order is successfully placed, and the message "Your order has been placed!" is displayed.

Test login

Test Case ID	Description	Test Steps	Expected Result
TC001	Verifies successful login and logout process.	1. Navigate to the homepage. 2. Click "My Account" > "Login". 3. Enter valid login credentials.	Login successful, redirected to the account page, then logs out and redirects to homepage.

		4. Click submit. 5. Logout and verify redirection.	
TC002	Verifies login failure with an invalid email address.	1. Navigate to login page. 2. Enter invalid email and password. 3. Click submit. 4. Verify error message.	Error message: "Warning: No match for E-Mail Address and/or Password." is displayed.
TC003	Verifies login failure with an incorrect password.	1. Navigate to login page. 2. Enter valid email and incorrect password. 3. Click submit. 4. Verify error message.	Error message: "Warning: No match for E-Mail Address and/or Password." is displayed.
TC004	Verifies login failure when the password field is empty.	1. Navigate to login page. 2. Enter valid email and leave password empty. 3. Click submit. 4. Verify error message.	Error message: "Warning: No match for E-Mail Address and/or Password." is displayed.
TC005	Verifies login failure when the email field is empty.	1. Navigate to login page. 2. Enter valid password and leave email empty. 3. Click submit. 4. Verify error message.	Error message: "Warning: No match for E-Mail Address and/or Password." is displayed.
TC006	Verifies login failure when special characters are used in email and password fields.	1. Navigate to login page. 2. Enter special characters in both email and password fields. 3. Click submit. 4. Verify error message.	Error message: "Warning: No match for E-Mail Address and/or Password." is displayed.

| TC007 | Verifies that SQL injection attempts are blocked and an error message is shown. | 1. Navigate to login page. 2. Enter SQL injection payload (' OR '1'='1) in both email and password fields. 3. Click submit. 4. Verify error message. | Error message: "Warning: No match for E-Mail Address and/or Password." is displayed, no successful login. |

Test login checkout

Test Case ID	Description	Test Steps	Expected Result
TC001	Test login with valid credentials	1. Open the login page. 2. Enter email "quoctrung87377@gmail.com". 3. Enter password "Nozdormu1#". 4. Click the login button. 5. Check the page title.	The page title is "My Account", indicating successful login.
TC002	Test checkout with valid information	1. Log in. 2. Add a product to the cart. 3. Go to the cart and click the Checkout button. 4. Enter valid payment information: Name, Address, City, Postal Code, Country, Region. 5. Choose a payment method. 6. Confirm the order.	Success message "Your order has been placed!" appears.
TC003	Test checkout without selecting a payment method	1. Log in. 2. Add a product to the cart. 3. Go to the cart and click the Checkout button. 4. Enter valid payment information. 5. Do not select a payment method. 6. Confirm the order.	Error message "Warning: Please select a payment method!" appears.
TC004	Test checkout with empty payment information	1. Log in. 2. Add a product to the cart. 3. Go to the cart and click the Checkout button. 4. Do not enter payment information (leave it empty).	Error message "Warning: You must provide address information!" appears.

Test Case ID		Test Steps	Expected Result
		5. Click the confirm order button.	
TC005	Test checkout with payment information exceeding limit	1. Log in. 2. Add a product to the cart. 3. Go to the cart and click the Checkout button. 4. Enter payment information exceeding the character limit (256 characters). 5. Click the confirm order button.	Error message "Warning: Address does not appear to be valid!" appears.
TC006	Test checkout with insufficient payment information	1. Log in. 2. Add a product to the cart. 3. Go to the cart and click the Checkout button. 4. Enter insufficient payment information (leave it blank). 5. Click the confirm order button.	Error message "Warning: Please enter your first name!" appears.

Test navigation

Test Case ID	Description	Test Steps	Expected Result
TC01	Navigate to Products Page	1. Open the homepage (https://demo.opencart.com/en-gb?route=common/home). 2. Wait for the "Desktops" link to be clickable. 3. Click on the "Desktops" link.	The page navigates to the "Desktops" products page.

Test register

Test Case ID	Description	Test Steps	Expected Result
TC001	Test valid registration with all required fields	1. Navigate to the registration page. 2. Fill out valid data in the registration form (first name, last name, email, password). 3. Agree to the privacy policy. 4. Submit the registration form.	Success message displayed: "Your Account Has Been Created!"
TC002	Test empty required fields submission	1. Navigate to the registration page. 2. Click submit without filling out any fields.	Error messages for all required fields are displayed (e.g., "First Name must be between 1 and 32 characters")
TC003	Test invalid email input	1. Navigate to the registration page. 2. Fill out	Error message for invalid email displayed: "E-Mail

		valid data in all fields except email (invalid email format). 3. Submit the form.	Address does not appear to be valid!"
TC004	Test already registered email	1. Navigate to the registration page. 2. Fill out valid data and use an already registered email. 3. Submit the form.	Error message displayed: "E-Mail Address is already registered!"
TC005	Test with maximum input lengths	1. Navigate to the registration page. 2. Fill in maximum length data for first name, last name, email, and password. 3. Submit the form.	Registration successful; confirmation message displayed, and user redirected to the success page.
TC006	Test exceeding maximum input lengths	1. Navigate to the registration	Error message displayed: "Warning:

		page. 2. Fill in data exceeding maximum allowed lengths for first name, last name, email, and password. 3. Submit the form.	Please check the form carefully for errors!"
TC007	Test special characters in name	1. Navigate to the registration page. 2. Fill in special characters in the first name and last name. 3. Submit the form.	Error message displayed: "First Name must be between 1 and 32 characters!"

Test search

Test Case ID	Description	Test Steps	Expected Result
TC001	Test search with an existent keyword	1. Call search_products(driver, "MacBook"). 2. Verify if products are returned for the search query.	Products related to "MacBook" should be returned and displayed.
TC002	Test search with a nonexistent keyword	1. Call search_products(driver, "NonExistentProduct123").	No products should be found for the nonexistent keyword.

		2. Verify that no products are returned.	
TC003	Test search with an uppercase keyword	1. Call search_products(driver, "MACBOOK"). 2. Verify if products related to "MacBook" are returned for the uppercase keyword.	Products related to "MacBook" should be returned regardless of the case.
TC004	Test search with a lowercase keyword	1. Call search_products(driver, "macbook"). 2. Verify if products related to "MacBook" are returned for the lowercase keyword.	Products related to "MacBook" should be returned regardless of the case.
TC005	Test search with a keyword containing special characters	1. Call search_products(driver, "!@#$%^&*()"). 2. Verify that no products are returned.	No products should be found for special character keywords.
TC006	Test search with keyword surrounded by whitespace	1. Call search_products(driver, " MacBook "). 2. Verify that products are returned for the search query with surrounding whitespace.	Products related to "MacBook" should be returned despite the surrounding whitespace.
TC007	Test search with an empty search query	1. Call search_products(driver, ""). 2. Verify that no products are returned for the empty search query.	No products should be found for an empty search query.
TC008	Test search with special characters	1. Call search_products(driver, "!@#$%^&*()_+"). 2. Verify that no products are returned for the search	No products should be found for a search query containing special characters.

| | | query with special characters. | |

Pass/Fail Static:	
Total	33
Pass	25
Fail	8

Execution: in Report.html
Error Details:
The majority of errors are TimeOutException due to cloudflare and error of website.
For instance: When you checkout product, you must enter a shipping method before you can enter a payment method. However, shipping method will display when you access the website on an external browser, will not display when running using **selenium.**