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	Test valid product addition	1. Open home page of OpenCart. 2. Wait until"Add to Cart" display and click 3. Wait success notifications display	The product "iPhone" was added to the cart. Displays a success message, containing the word "Success" and the product name "iPhone".
TC002	Test adding two products to cart	1. Open OpenCart main page. 2. Add the first product (iPhone). 3. Wait for the success notification. 4. Open the MacBook product page. 5. Add a second product (MacBook). 6. Open the shopping cart and confirm the product.	Both products "iPhone" and "MacBook" are added to the cart. When opening the cart, the names of the products in the cart must match the expected list: ["iPhone", "MacBook"].

Test checkout guest:

Test Case ID	Description	Steps	Expected Result
TC01	Test the checkout process with a guest account.	1. Open the OpenCart homepage. 2. Add product (iPhone) to cart. 3. Open the shopping cart.	The order was successfully created and confirmation information is displayed.

		4. Proceed to pay. 5. Enter personal information and address. 6. Accept the terms and continue. 7. Complete the order. 8. Successful order confirmation.	
TC02	Test with maximum limit for customer information fields.	1. Open the OpenCart homepage. 2. Add product (MacBook) to cart. 3. Open the shopping cart. 4. Proceed to payment. 5. Enter personal information at maximum length. 6. Accept the terms and continue. 7. Check for error messages.	The system displays an invalid input error message.
TC03	Kiểm thử với giới hạn tối thiểu cho các trường thông tin khách hàng.	1. Open the OpenCart homepage. 2. Add product (MacBook) to cart. 3. Open the shopping cart. 4. Proceed to pay.	The system displays an invalid input error message.

		5. Enter personal information with minimum length. 6. Accept the terms and continue. 7. Check for error messages.	

Test Login:

Test Case ID	Description	Steps	Expected Result
TC01	Test the successful login and logout process.	1. Navigate to the OpenCart homepage. 2. Click the "Account" dropdown. 3. Select "Sign in". 4. Enter a valid email in the email field. 5. Enter a valid password. 6. Click the login button. 7. Confirm successful login and check the URL. 8. Sign out and confirm.	Login and logout successful, URL correct.
TC02	Test logging in with invalid email.	1. Navigate to the OpenCart login page. 2. Enter invalid email. 3. Enter an invalid password. 4. Click the login button.	Displays an error message: "Email address and/or password not found."

		5. Wait for the error message to appear.	
TC03	Test logging in with incorrect password.	1. Navigate to the OpenCart login page. 2. Enter a valid email. 3. Enter incorrect password. 4. Click the login button. 5. Wait for the error message to appear.	Displays an error message: "Email address and/or password not found."
TC04	Test login with blank password.	1. Navigate to the OpenCart login page. 2. Enter a valid email. 3. Leave the password field blank. 4. Click the login button. 5. Wait for the error message to appear.	Displays an error message: "Email address and/or password not found."
TC005	Check when the email field is blank and a valid password is provided.	1. Access the login page. 2. Enter a valid password. 3. Leave the email field blank. 4. Click the login button. 5. Check for error messages.	Display error message: "Warning: No match for E-Mail Address and/or Password."
TC006	Test the ability to handle special characters in email and password fields.	1. Access the login page. 2. Enter special characters in the email and password fields. 3. Click the login button. 4. Check for error messages.	Display error message: "Warning: No match for E-Mail Address and/or Password."
TC007	Test security against SQL injection attacks.	1. Access the login page. 2. Enter the SQL injection payload in the email and	Display error message: "Warning: No match for E-

		password fields. 3. Click the login button. 4. Check for error messages.	Mail Address and/or Password."

Test LoginCheckout:

Test Case ID	Description	Steps	Expected Result
TC001	Check the payment process with valid information after logging in.	1. Call the login(driver) function to log in to the system. 2. Open the product page and add the product to the cart. 3. Access the shopping cart page. 4. Click the payment button. 5. Enter payment information (full name, address, city, postal code, country, region). 6. Choose payment method. 7. Order confirmation. 8. Check the success message.	Display success message: "Your order has been placed!"

Test Navigation:

Test Case ID	Description	Steps	Expected Result
TC005	Test the ability to navigate to product and detail pages.	1. Open OpenCart main page. 2. Wait a while for the page to finish loading. 3. Click the "Desktops" link. 4. Wait and verify that the page title contains "Desktops". 5. Click the "MacBook" product link.	Successfully navigated to product page and product detail page.

		6. Wait and verify that the page title contains "MacBook".	

Test Register:

Test Case ID	Description	Steps	Expected Result
TC001	Check for successful registration with valid data	1. Open the registration page. 2. Enter valid data. 3. Accept the privacy policy. 4. Submit the form.	Registered successfully and displayed the message "Your Account Has Been Created!"
TC002	Check for error messages when leaving required fields blank	1. Open the registration page. 2. Press the send button without filling in the information. 3. Check for error messages.	Displays error messages for required fields.
TC003	Check the error message for invalid email	1. Open the registration page. 2. Enter invalid email. 3. Submit the form. 4. Check for error messages.	Display error message "E-Mail Address does not appear to be valid!"
TC004	Check the registration with data at the lower limit	1. Open the registration page. 2. Enter data at the lower limit.	Registered successfully with data at lower limit.

		3. Submit the form. 4. Kiểm tra thông báo thành công.	
TC005	Test the subscription with data at the upper limit	1. Open the registration page. 2. Enter data at the upper limit. 3. Submit the form. 4. Check the success message.	Registered successfully with data at the above limit.

Test responsive:

Test Case ID	Description	Steps	Expected Result
TC001	Test the interface on Desktop	1. Open the home page 2. Set the window size to 1200x800 3. Refresh the page 4. Check the search box 5. Check the "My Account" dropdown 6. Check the main content	All elements display properly on Desktop.
TC002	Test the interface on Tablet	1. Open the home page 2. Set the window size to 768x1024 3. Refresh the page 4. Check the search box 5. Check the "My Account" dropdown 6. Check the main content	All elements display properly on Tablet.

		1. Open the home page	
TC003	Test the interface on Mobile	2. Set the window size to 375x667	All elements display properly on Mobile.
		3. Refresh the page	
		4. Check the search box	
		5. Check the "My Account" dropdown	
		6. Check the main content	

Test Search:

Test Case ID	Description	Steps	Expected Result
TC001	Search for products with valid keywords (MacBook)	1. Open the home page 2. Enter the keyword "MacBook" into the search box 3. Submit a search request 4. Check the results list	Product found, result list is not empty.
TC002	Search for products with keywords that do not exist	1. Open the home page 2. Enter the keyword "NonExistentProduct123" into the search box 3. Submit a search request 4. Check the results list	No products found.
TC003	Search for products with capitalized keywords	1. Open the home page 2. Enter the keyword "MACBOOK" into the search box 3. Submit a search request	Product found, result list is not empty.

		4. Check the results list	
TC004	Search for products with lowercase keywords	1. Open the home page 2. Enter the keyword "macbook" into the search box 3. Submit a search request 4. Check the results list	Product found, result list is not empty.
TC005	Search with keywords containing special characters	1. Open the home page 2. Enter the keyword "!@#$%^&*()" into the search box 3. Submit a search request 4. Check the results list	No products found.
TC006	Search with keywords that have spaces around them	1. Open the home page 2. Enter the keyword "MacBook" into the search box 3. Submit a search request 4. Check the results list	Product found, result list is not empty.
TC007	Search with empty keywords	1. Open the home page 2. Enter the keyword "" into the search box 3. Submit a search request 4. Check the results list	No products found.
TC008	Search with keywords containing only special characters	1. Open the home page 2. Enter the keyword "!@#$%^&*()_+" into the search box 3. Submit a search request 4. Check the results list	No products found.

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.**