Yên Bùi Thái Tuấn

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DCT121C4

**Assignment 2: Automated Testing with Selenium**

**Link:** **https://github.com/Taun0813/Automated-Testing-with-Selenium.git**

**Programming Language (Ngôn ngữ lập trình): Python.**

**IDE (Môi trường phát triển tích hợp): Visual Studio Code**

**Selenium WebDriver:**

**• Cài đặt và cấu hình Selenium WebDriver.**

**• Đảm bảo cài đặt đúng WebDriver cho trình duyệt được chọn.**

**Browser (Trình duyệt): Edge.**

**Dependencies (Phụ thuộc):**

**• Quản lý các phụ thuộc bằng pip.**

**Version Control (Hệ thống kiểm soát phiên bản): Sử dụng Git và GitHub để quản lý mã nguồn**

**Report Generation:**

**✓ ▪ Test Case Summary: có tổng cộng 7 test case cho 7 function,các function như Login(with valid and invalid value)**

* **Login and Logout Functionality**
* **Form Submission Functionality**
* **Navigation Functionality**
* **Data Validation Functionality**
* **Add to Cart and Checkout Functionality**
* **Search Functionality**
* **Responsive Design Functionality**

**Individual Execution: ▪ Pass/Fail Statistics: 6 Passed, 1 Failed**

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| **Test Case ID** | **Test Case Name** | **Test Case Description** | **Result** |
| 01 | Login and Logout Functionality | Use assertions to check for elements that indicate a successful login (like the presence of a logout button) | Pass |
| 02 | Form Submission Functionality | Add validations to check if data is correctly handled and if submission succeeds | Pass |
| 03 | Navigation Functionality | Validate the URLs or specific elements on each page to confirm navigation. | Pass |
| 04 | Data Validation Functionality | Verify data accuracy on pages like dashboards or product details. | Pass |
| 05 | Add to Cart and Checkout Functionality | Check that items in the cart are correct and that the checkout process can be completed. | Failed |
| 06 | Search Functionality | Use assertions to confirm that relevant results appear. | Pass |
| 07 | Responsive Design Functionality | Automate resizing the browser window to test responsiveness. | Pass |

**Batch Execution: ▪ Pass/Fail Statistics:**

**Individual Execution Report:**

**Test case 1: Login and Logout Functionality**

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| **Test Case ID** | TC\_01 | **Test Case Description** | | Use assertions to check for elements that indicate a successful login (like the presence of a logout button) | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail Address: abc@gmail.com |
| 2 | User is registered and logout out. |  | 2 | Password: 12345 |

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| **Test Scenario** | Test user login |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  common/home&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Click on ‘My Account’ | The website displays the menu of the account | As Expected | Pass |
| 3 | Click ‘Login’ | Site should redirect to the ‘Returning Customer page | As Expected | Pass |
| 4 | Enter Account Details into all the Fields | The system accepts the information | As Expected | Pass |
| 5 | Click ‘Login’ | The website will display page “My Account” | As Expected | Pass |
| 6 | Click on ‘My Account’ | The website displays the menu of the account | As Expected | Pass |
| 7 | Click ‘Logout’ | The website displays the page “Account Logout” | As Expected | Pass |
| 8 | Click ‘Continue’ | The Website displays homepage of the web | As Expected | Pass |

**Code by Python:**

def test\_login\_logout(driver):

    driver.get("https://demo-opencart.com/index.php?route=common/home&language=en-gb")

    time.sleep(5)

    driver.find\_element(By.XPATH, "//\*[@id='top']/div/div[2]/ul/li[2]/div/a").click()

    time.sleep(5)

    driver.find\_element(By.CSS\_SELECTOR, "a.dropdown-item[href\*='route=account/login']").click()

    time.sleep(3)

    # Login

    driver.find\_element(By.ID, "input-email").send\_keys("abc@gmail.com")

    driver.find\_element(By.ID, "input-password").send\_keys("12345")

    driver.find\_element(By.CSS\_SELECTOR, "button.btn.btn-primary").click()

    # Validate login success or failure

    time.sleep(2)

    # Logout

    driver.find\_element(By.XPATH, "//\*[@id='top']/div/div[2]/ul/li[2]/div/a").click()

    time.sleep(3)

    # Quá trình đăng xuất

    driver.find\_element(By.CSS\_SELECTOR, "a.dropdown-item[href\*='route=account/logout']").click()

    time.sleep(2)

**Test Case 2: Form Submission Functionality**

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| **Test Case ID** | TC\_02 | **Test Case Description** | | Add validations to check if data is correctly handled and if submission succeeds | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail = abc@gmail.com |
| 2 | User is logged out and the registration page is accessible. |  | 2 | Password = 12345 |

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| **Test Scenario** | Test Form Submission Functionality |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  account/login&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Fill the Form | The website displays the results | As Expected | Pass |
| 3 | Click ‘Login’ | The website will display page “My Account” | As Expected | Pass |

**Code by Python :**

def test\_form\_submission(driver):

driver.get("https://demo-opencart.com/index.php?route=account/login&language=en-gb")

# Fill out form

driver.find\_element(By.ID, "input-email").send\_keys("abc@gmail.com")

driver.find\_element(By.ID, "input-password").send\_keys("123")

driver.find\_element(By.CSS\_SELECTOR, "button.btn.btn-primary").click()

# Check for submission success message

time.sleep(2)

success\_message = driver.find\_element(By.ID, "alert").text

assert "Warning: No match for E-Mail Address and/or Password." in success\_message

**Test Case 3: Navigation Functionality**

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| **Test Case ID** | TC\_03 | **Test Case Description** | | Validate the URLs or specific elements on each page to confirm navigation. | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail Address: abc@gmail.com |
| 2 | User is login |  | 2 | Password: 12345 |

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| **Test Scenario** | Test Navigation Functionality |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  account/login&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Fill the form | The website displays the results | As Expected | Pass |
| 3 | Click ‘Login’ | Site should redirect to the ‘Returning Customer page | As Expected | Pass |
| 4 | Click ‘Wish List (0)’ | The website displays “My Wishlist” | As Expected | Pass |
| 5 | Click ‘Shopping Cart’ | The website displays “Shopping Cart” | As Expected | Pass |

**Code by Python:**

def test\_navigation(driver):

    driver.get("https://demo-opencart.com/index.php?route=account/login&language=en-gb")

    #Login

    driver.find\_element(By.ID, "input-email").send\_keys("abc@gmail.com")

    driver.find\_element(By.ID, "input-password").send\_keys("12345")

    driver.find\_element(By.CSS\_SELECTOR, "button.btn.btn-primary").click()

    time.sleep(2)

    driver.find\_element(By.XPATH, "//span[@class='d-none d-md-inline' and text()='Wish List (0)']").click()

    time.sleep(5)

    assert "My Wishlist" in driver.title

    time.sleep(5)

    driver.find\_element(By.XPATH, "//span[@class='d-none d-md-inline' and text()='Shopping Cart']").click()

    time.sleep(3)

    assert "Shopping Cart" in driver.title

**Test case 4: Data Validation Functionality**

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| **Test Case ID** | TC\_04 | **Test Case Description** | | Verify data accuracy on pages like dashboards or product details. | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail Address: abc@gmail.com |
| 2 | User is login |  | 2 | Password: 12345 |

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| **Test Scenario** | Test Data Validation Functionality |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  account/login&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Fill the form | The website displays the results | As Expected | Pass |
| 3 | Click ‘Login’ | Site should redirect to the ‘Returning Customer page | As Expected | Pass |
| 4 | Click ‘Macbook’ | The website displays the page “Macbook” | As Expected | Pass |
| 5 | Check price, description, and name | The website displays the information of “Macbook” | As Expected | Pass |

**Code by Python:**

def test\_data\_validation(driver):

    driver.get("https://demo-opencart.com/index.php?route=common/home&language=en-gb")

    time.sleep(2)

    #Check name

    product\_names = driver.find\_element(By.XPATH, "//a[text()='MacBook']")

    assert product\_names.text == "MacBook", "No Products names found!"

    #Check price

    product\_prices\_element = driver.find\_element(By.XPATH, "//\*[@id='content']/div[2]/div[1]/div/div[2]/div/div/span[1]")

    prodct\_price = product\_prices\_element.text.split("\n")[0]

    assert prodct\_price == "$602.00", "Price is not correct!"

    #Check description

    product\_descriptions\_element = driver.find\_element(By.XPATH, "//div[@class='description']/p")

    product\_descriptions = product\_descriptions\_element.text

    except\_description = "Intel Core 2 Duo processor”

    assert except\_description in product\_descriptions, "Description is not correct!"

    print("Data validation passed!")

**Test Case 5: Add to Cart and Checkout Functionality**

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| **Test Case ID** | TC\_05 | **Test Case Description** | | Check that items in the cart are correct and that the checkout process can be completed. | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail Address: abc@gmail.com |
| 2 | User is login |  | 2 | Password: 12345 |

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| **Test Scenario** | Test Add to Cart and Checkout Functionality |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  account/login&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Fill the form | The website displays the results | As Expected | Pass |
| 3 | Click ‘Login’ | Site should redirect to the ‘Returning Customer page | As Expected | Pass |
| 4 | Navigate to  <https://demo-opencart.com/index.php?route=>  common/home&language=en-gb | The website displays page home | As Expected | Pass |
| 5 | Click ‘Macbook’ | The website displays the page “Macbook” | As Expected | Pass |
| 6 | Click button ‘Shopping’ end of the Macbook | The website display notification “ Success: You have added [MacBook](https://demo-opencart.com/index.php?route=product/product&language=en-gb&product_id=43) to your [shopping cart](https://demo-opencart.com/index.php?route=checkout/cart&language=en-gb)!” | As Expected | Pass |
| 7 | Click button ‘Shopping Cart’ in the header | The website display the dropdown menu | As Expected | Pass |
| 8 | Click ‘Checkout’ | The website navigation to ‘Checkout’ page | As Expected | Pass |
| 9 | Fill the form and click ‘Cofirm Order’ | The website notification “Success” | Not As Expected | Failed |

**Code by Python:**

def test\_add\_to\_cart\_and\_checkout(driver):

    driver.get("https://demo-opencart.com/index.php?route=account/login&language=en-gb")

    time.sleep(2)

    #Login

    driver.find\_element(By.ID, "input-email").send\_keys("abc@gmail.com")

    driver.find\_element(By.ID, "input-password").send\_keys("12345")

    driver.find\_element(By.CSS\_SELECTOR, "button.btn.btn-primary").click()

    time.sleep(2)

    driver.get("https://demo-opencart.com/")

    time.sleep(10)

    # Add item to cart

    driver.find\_element(By.XPATH, "//\*[@id='content']/div[2]/div[1]/div/div[2]/form/div/button[1]").click()

    time.sleep(2)

    # Go to cart and proceed to checkout

    driver.find\_element(By.CSS\_SELECTOR, "button.btn.btn-lg.btn-inverse.btn-block.dropdown-toggle").click()

    time.sleep(2)

    driver.find\_element(By.XPATH, "//\*[@id='header-cart']/div/ul/li/div[2]/p/a[3]").click()

    time.sleep(2)

    assert "Checkout" in driver.title

**Test Case 6: Search Functionality**

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| **Test Case ID** | TC\_05 | **Test Case Description** | | Use assertions to confirm that relevant results appear. | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail Address: abc@gmail.com |
| 2 | User is login |  | 2 | Password: 12345 |

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| **Test Scenario** | Test Search Functionality |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  common/home&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Click ‘Search bar’ and enter ‘Macbook’ | The website displays the “Macbook” on the ‘Search bar’ | As Expected | Pass |
| 3 | Click button ‘Search’ | The website display ‘Seach - Macbook’ | As Expected | Pass |

**Code by Python:**

def test\_search(driver):

    driver.get("https://demo-opencart.com/index.php?route=common/home&language=en-gb")

    time.sleep(2)

    # Perform search

    driver.find\_element(By.NAME, "search").send\_keys("Macbook")

    time.sleep(2)

    # Validate search results

    driver.find\_element(By.CSS\_SELECTOR, "button.btn.btn-light.btn-lg").click()

    time.sleep(2)

    assert "Search - Macbook" in driver.title

**Test Case 7: Responsive Design Functionality**

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| **Test Case ID** | TC\_05 | **Test Case Description** | | Automate resizing the browser window to test responsiveness. | |
| **Created By** | Thái Tuấn | **Reviewed By** |  | **Version** |  |

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| **Tester's Name** | Thái Tuấn | **Date Tested** | 31-Oct-2024 | **Test Case (Pass/Fail/Not Executed)** | Pass |

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| **S #** | **Prerequisites:** |  | **S #** | **Test Data** |
| 1 | Access to Microsoft Edge Browser |  | 1 | E-Mail Address: abc@gmail.com |
| 2 | User is login |  | 2 | Password: 12345 |

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| **Test Scenario** | Test Search |

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| **Step #** | **Step Details** | **Expected Results** | **Actual Results** | **Pass / Fail / Not executed / Suspended** |
| 1 | Navigate to  <https://demo-opencart.com/index.php?route=>  common/home&language=en-gb | The browser displays the homepage of the web | As Expected | Pass |
| 2 | Drag and drop the website size corresponding to: (1024, 768), (768, 1024), (375, 667) | The website displays the size corresponding | As Expected | Pass |

**Code by Python:**

def test\_responsive\_design(driver):

    driver.get("https://demo-opencart.com/index.php?route=common/home&language=en-gb")

    # Resize for different screen sizes

    for width, height in [(1024, 768), (768, 1024), (375, 667)]:

        driver.set\_window\_size(width, height)

        time.sleep(2)

        assert "menu" in driver.page\_source, "Responsive design check failed for size: {}x{}".format(width, height)