**Lab Exercise 2.2 - Sanity Testing using Selenium WebDriver in Java with Microsoft Edge**

**Scenario:**

You are testing an **e-commerce website** where users can **log in** and **add items to the cart**. A recent **code update** was made to improve the **"Add to Cart"** functionality.

**Sanity Test Cases:**

1. **Login Functionality**
   * Verify that users can still log in with valid credentials.
   * Ensure that invalid credentials are not accepted.
2. **Add to Cart Functionality (Updated Feature)**
   * Verify that clicking **"Add to Cart"** adds the correct item.
   * Check that the cart reflects the correct **price** and **quantity**.
3. **Checkout Page**
   * Ensure that the checkout button redirects to the payment page.

**Selenium Example: Sanity Test for "Add to Cart" in an E-Commerce Website**

**Prerequisites**

* **Java 17+**
* **Selenium WebDriver**
* **Microsoft Edge WebDriver**
* **Maven dependencies (if using Maven)**

<dependencies>

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>4.5.1</version>

</dependency>

</dependencies>

**Java Code for Sanity Testing**

package demo;

import java.time.Duration;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.edge.EdgeDriver;

import org.openqa.selenium.edge.EdgeOptions;

public class MyClass {

public static void main(String[] args) {

// Set the EdgeDriver executable path

System.setProperty("webdriver.edge.driver", "C:\\webdriver\\msedgedriver.exe");

// EdgeOptions configuration

EdgeOptions options = new EdgeOptions();

options.addArguments("--remote-allow-origins=\*"); // Bypass security restrictions

options.setCapability("ms:edgeOptions", options);

options.setCapability("se:ieOptions", "{}"); // Fix WebSocket issue

// Start EdgeDriver

WebDriver driver = new EdgeDriver(options);

try {

// Navigate to the e-commerce website

driver.get("https://www.saucedemo.com/");

driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(5));

// Login Step

driver.findElement(By.id("user-name")).sendKeys("standard\_user");

driver.findElement(By.id("password")).sendKeys("secret\_sauce");

driver.findElement(By.id("login-button")).click();

// Verify login success

if (driver.getCurrentUrl().contains("inventory")) {

System.out.println("Login Successful - Passed");

} else {

System.out.println("Login Failed - Failed");

}

// Add first product to cart

driver.findElement(By.id("add-to-cart-sauce-labs-backpack")).click();

// Navigate to Cart

driver.findElement(By.className("shopping\_cart\_link")).click();

// Verify item in cart

WebElement cartItem = driver.findElement(By.className("inventory\_item\_name"));

if (cartItem.getText().contains("Sauce Labs Backpack")) {

System.out.println("Add to Cart Functionality - Passed");

} else {

System.out.println("Add to Cart Functionality - Failed");

}

// Proceed to checkout

driver.findElement(By.id("checkout")).click();

// Verify checkout page

if (driver.getCurrentUrl().contains("checkout-step-one")) {

System.out.println("Checkout Page Loaded Successfully - Passed");

} else {

System.out.println("Checkout Page Load Failed - Failed");

}

} catch (Exception e) {

System.out.println("Sanity Test Failed: " + e.getMessage());

} finally {

// Close browser

driver.quit();

}

}

}

**Expected Output**

Login Successful - Passed

Add to Cart Functionality - Passed

Checkout Page Loaded Successfully - Passed

**Key Takeaways**

* **Sanity Testing** ensures that small updates don’t break existing functionality.
* **Quick, focused tests** are performed rather than full regression testing.
* **Automating sanity tests** using Selenium helps ensure stability after minor changes.