**I have detailly mentioned here what I used and why I used those functions in the written code**

**1. Setting Up WebDriver and Opening Browser:**

* System.setProperty("webdriver.gecko.driver","D:\\Softwares\\Java & Selenium\\geckodriver-v0.33.0-win64\\geckodriver.exe");

- This line sets the system property for the GeckoDriver (Firefox driver) executable file.

* WebDriver driver = new FirefoxDriver();`

- Creates a new instance of the FirefoxDriver, which is used to control the Firefox browser.

**2. Main Method**

* try { ... } finally { driver.quit(); }

- The main method contains a try-finally block to ensure that the WebDriver is closed (browser is closed) even if an exception occurs during execution.

**3. User Registration Function: `register()**

* driver.get("https://demo.opencart.com/index.php?route=account/register");

- Navigates to the registration page of an OpenCart demo site.

* Filling Registration Form

- Finds input fields by name and populates them with provided information.

* Scrolling Down

- Scrolls down the page by 500 pixels.

* Privacy Policy Checkbox:

- Finds the checkbox for agreeing to the privacy policy and clicks it.

* Clicking Continue Button

- Finds and clicks the registration continue button.

**4. User Login Function: `login()**

* driver.get("https://demo.opencart.com/index.php?route=account/login")

- Navigates to the login page of the OpenCart demo site.

* Filling Login Form

- Finds input fields by name and populates them with provided email and password.

* Clicking Continue Button

- Finds and clicks the login continue button.

**5. Selecting a Product: `selectProduct()**

* driver.get("https://demo.opencart.com/index.php?route=product/product&product\_id=43");

- Navigates to a specific product page on the OpenCart demo site.

**6. Adding Product to Cart: `addToCart()**

* WebElement addToCartButton = driver.findElement(By.id("button-cart"));

- Finds the "Add to Cart" button by its ID.

* Clicking Add to Cart

- Clicks the "Add to Cart" button.

* Waiting for 2 Seconds

- Pauses execution for 2 seconds.

**7. Checkout Process: `checkout()**

* driver.get("https://demo.opencart.com/index.php?route=checkout/cart");

- Navigates to the shopping cart page on the OpenCart demo site.

* WebElement checkoutButton = driver.findElement(By.cssSelector("a[href\*='/checkout']"));`\*\*

- Finds the checkout button using a CSS selector.

* Clicking Checkout

- Clicks the checkout button.

**8.Utility Functions**

* public static CharSequence[] getCharSeqFromString(String input)

- Converts a string into an array of CharSequence.

* private static void scrollDown(WebDriver driver, int pixels)

- Uses JavaScriptExecutor to scroll down the page by a specified number of pixels.

This Selenium code automates the process of registering users, logging in, selecting a product, adding it to the cart, and initiating the checkout process on an OpenCart demo site. The WebDriver interacts with the browser, finding elements and performing actions to simulate user behaviour.

By

Maharaj S