Source Code

Browser Automation Testing with Selenium with JUnit

```java
package com.app.junitDemo;
import org.junit.jupiter.api.Test; import
org.openqa.selenium.By; import
org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import static org.junit.jupiter.api.Assertions.*;

public class BrowserAutomation { @Test
    public void testFacebookAuthentication() {


        // Initialize ChromeDriver
        WebDriver driver = new ChromeDriver();

        // Open Facebook login page
        driver.get("https://www.facebook.com");

        // Find username and password input fields and login button WebElement
        usernameField = driver.findElement(By.id("email")); WebElement
        passwordField = driver.findElement(By.id("pass")); WebElement loginButton
        = driver.findElement(By.name("login"));

        // Enter your Facebook credentials (replace with your test account details)
        usernameField.sendKeys("demouser@gmail.com");
        passwordField.sendKeys("demoUser@1234567890");

        // Click the login button
        loginButton.click();

        // Wait for the authentication process (replace with appropriate waiting
mechanism)

        // Assert that the login was successful (replace with appropriate verification)
        assertFalse(driver.getCurrentUrl().contains("facebook.com/home"), "Facebook
authentication failed");

        // Close the browser driver.quit();
    }
}
```

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import org.openqa.selenium.chrome.ChromeDriver;
import static org.junit.jupiter.api.Assertions.*;

public class SearchEngine { @Test
    public void testGoogleSearch() {


        // Initialize ChromeDriver
        WebDriver driver = new ChromeDriver();

        // Open Google search page driver.get("https://www.google.com");

        // Find the search input field and search button WebElement
        searchField = driver.findElement(By.name("q"));
        WebElement searchButton = driver.findElement(By.id("APjFqb"));

        // Enter your search query searchField.sendKeys("Unit
        Testing");

        // Click the search button
        searchButton.click();

        // Wait for the search results page (replace with appropriate waiting
mechanism)

        // Assert that the search results are displayed (replace with appropriate
verification)
        assertFalse(driver.getTitle().contains("Unit Testing"), "Google search failed");

        // Close the browser driver.quit();
    }
}
```