**Phase End Project: Phase 5**

**Automate an E-Commerce Web Application**

**Write Up**

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**Overview:**

The Flipkart Automation project is designed to automate the testing of various functionalities on the Flipkart e-commerce website using Selenium WebDriver and TestNG. The project covers several test scenarios, including login closure, scrolling, product search, image loading, scroll frequency measurement, image download validation, and screen resolution testing.

**Tools and Technologies:**

Selenium WebDriver: A powerful tool for automating browser actions.

TestNG: A testing framework for writing and running test cases.

WebDriverManager: A library for managing WebDriver binaries automatically.

Maven: A project management and comprehension tool for Java.

Project Structure:

The project consists of the following key components:

**AppTest Class:**

A simple TestNG test case that ensures the basic functionality of the testing framework.

**FlipkartTestChrome Class:**

A series of TestNG test methods covering different aspects of the Flipkart website.

BeforeClass and AfterClass methods for setting up and tearing down the WebDriver instance.

**Pom.xml:**

Maven project configuration file containing dependencies for WebDriverManager, Selenium WebDriver, and TestNG.

**Testing.xml:**

TestNG suite configuration file specifying the classes to be included in the test suite.

**Test Scenarios:**

***Close Login Test:***

Verifies the functionality of closing the login popup.

***Scroll Test:***

Tests the scrolling feature by scrolling to the bottom and top of the page.

***Search iPhone 13 Test:***

Searches for the iPhone 13 on the Flipkart website.

***Load Image Test:***

Navigates to a specific product page and waits for the product image to load.

***Scroll Frequency Test:***

Measures the time taken to scroll to a specific element on the page.

***Download Images Test:***

Validates the presence of an image on a product page.

***Screen Resolution Test:***

Tests the functionality of changing the browser window's dimensions and captures the screen resolution.

**Execution:**

The project can be executed by running the Testing.xml suite file using TestNG. Maven is used for dependency management and project build.

**Conclusion:**

The Flipkart Automation project demonstrates the capabilities of Selenium WebDriver and TestNG in automating functional tests for a real-world e-commerce website. The modular structure allows for easy maintenance and scalability as more test scenarios are added. The project can serve as a foundation for further automation testing on Flipkart or similar e-commerce platforms.