

Automate an E-Commerce Web Application

Algorithm:

To automate an E-Commerce Web Application using Selenium WebDriver and TestNG, we need to write test scripts for different test scenarios. Below is the algorithm that outlines the steps for automating the E-Commerce Web Application:

1. Set Up the WebDriver:

- Use WebDriverManager to set up the ChromeDriver or EdgeDriver.
- Navigate to the Flipkart homepage.

2. Close Login Pop-up (Priority = 1):

- Find the login pop-up element using the CSS selector.
- Use WebDriverWait to wait for the login pop-up element to become available.
- If the login pop-up exists, click on it to close it.
- Take a screenshot of the login pop-up.

3. Scroll (Priority = 2):

- Determine the page load time using performance test.
- Scroll to the bottom of the page using JavascriptExecutor.
- Take a screenshot of the page after scrolling.
- Scroll back to the top of the page.

4. Search Product (Priority = 3):

- Enter "iPhone 13" in the search bar.
- Click on the search button.
- Measure the time to load the search results.
- Take a screenshot of the search results page.

5. Load Image (Priority = 4):

- Open a specific product page.

- Wait for the product image to load using FluentWait.
- Check if the image is displayed.
- Take a screenshot of the product page after the image is loaded.

6. Scroll Frequency (Priority = 5):

- Identify an element on the page.
- Measure the time taken to scroll the element into view using JavascriptExecutor.

7. **Download Images (Priority = 6):

- Open a specific product page.
- Check if the product image is present using JavascriptExecutor.
- Take a screenshot of the product page after checking image presence.

8. Screen Resolution (Priority = 7):

- Resize the browser window to different resolutions (720x1080, 1280x800, 2256x1504).
- Get the height and width of the window using JavascriptExecutor.
- Take a screenshot after resizing the window.

9. Take Screenshot Method:

- Implement a method to take screenshots and store them in a specified location.

10. TestNG Annotations:

- Use @BeforeClass annotation to set up the WebDriver and navigate to the Flipkart homepage.
- Use @AfterClass annotation to close the WebDriver after all the tests are executed.
- Use @Test annotations for each test scenario with specified priorities.

11. TestNG XML Configuration:

- Create a testng.xml file to define the test suite and include test classes in the desired order.

12. Run the Tests:

- Run the testng.xml file to execute the test scenarios in the specified order