**Automate an E-Commerce Web Application**

**Problem Statement:**

To automate a real-world web application

**Background of the problem:**

Flipkart is an e-commerce platform, and they have launched a new feature to search for a product in a particular category. Once the product is searched, Flipkart displays it as a list of product items. To enhance the performance of the application, Flipkart has implemented lazy loading. It displays only a few products that can come on the screen. To display or load more products, the user must scroll down. As a Test Engineer, you are expected to test this feature end-to-end.

**Developer Details:**

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GitHub Link:

<https://github.com/PradeepaSaravanan/Java-Phase-Projects/tree/master/Phase5/End%20Project/AutomateECommerce>

Algorithm:

* Run the Test Cases with testing test.
* It will load flipkart website in both chrome and Internet Explorer browser.
* Once the Page is Loaded, It will send product name to be search in Flipkart.
* To search and add to cart, Flipkart website page is used to search the product.
* we set the system property and open chrome and maximize it.
* Next @Test will run which automate the required things.
* And then by using TakeScreenshot , we take the Screenshot, Generate as file and saved it in eclipse with the name mentioned on it.
* Then it moves to the product iphone page and show list of Product.
* Through this command, check whether the image is loaded or not.
* Through this command , We can check whether the scroll bar is present or not

**String execScript = "return document.documentElement.scrollHeight>document.documentElement.clientHeight;";**

**JavascriptExecutor scrollBarPresent = (JavascriptExecutor) driver;**

**Boolean test = (Boolean) (scrollBarPresent.executeScript(execScript));**

* It displays scroll bar is present if test is true otherwise it shows scroll bar is not present
* Through this command , we can scroll

**((JavascriptExecutor) driver).executeScript("window.scrollTo(0,2500);");**

Fluent Wait -Fluent wait is a dynamic wait which makes the driver pause for a condition which is checked at a frequency before throwing an exception.

* To verify that the image is downloaded before scroll down, Fluent wait command line is used

**Wait<WebDriver> w = new FluentWait<WebDriver>(driver).withTimeout(Duration.ofSeconds(10))**

**.pollingEvery(Duration.ofSeconds(2)).ignoring(NoSuchElementException.class);**

* APPLE iPhone 13 ((PRODUCT)RED, 256 GB) is loaded or not while scroll down

**Boolean p = (Boolean) ((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView();",er);**

* Argument[0].scrollIntoView() is used to scroll until the element is present. Command used to find the scroll height

**((JavascriptExecutor) driver).executeScript("return document.body.scrollHeight").toString());**

* Command used to scroll till last

**((JavascriptExecutor) driver).executeScript("window.scrollTo(0, document.body.scrollHeight);");**

* Through this , we say scroll reaches last

**Assert.assertSame(lastHeight, newHeight);**

* Last height=Expected scroll height.
* New height=actual scroll height.
* Same thing also performed on chrome and Internet Explorer.