SELENIUM

What are the limitations of Selenium?

* Selenium supports testing of only web-based applications
* Mobile applications cannot be tested using Selenium
* Captcha and Barcode readers cannot be tested using Selenium
* Reports can only be generated using third-party tools like TestNG or JUnit.
* As Selenium is a free tool, thus there is no ready vendor support through the user can find numerous helping communities.
* The user is expected to possess prior programming language knowledge.

What is the difference between assert and verify commands?

What is the difference between “/” and “//” in Xpath?

How do I launch the browser using WebDriver?IE/Chrome/FireFox

Certificate Errors in IE

Protect mode error

Browser zoom error in IE

What are the different types of waits available in WebDriver?

There are two types of waits available in WebDriver:

* Implicit Wait
* Explicit Wait
* Fluent Wait(if asked by interviewer)
* Implicit Wait

Implicit waits are used to provide a default waiting time (say 30 seconds) between each consecutive test step/command across the entire test script. Thus, the subsequent test step would only execute when the 30 seconds have elapsed after executing the previous test step/command.

* Explicit Wait:

Explicit waits are used to halt the execution till the time a particular condition is met or the maximum time has elapsed. Unlike Implicit waits, explicit waits are applied for a particular instance only.

How to select value in a dropdown

Select selectByValue = new Select(WebElement));

How to click on a hyper link using linkText

How to handle frame in WebDriver

driver.switchTo().frame(“name of the frame”);

driver.switchTo().defaultContent();

When do we use findElement() and findElements()?

What is the difference between driver.close() and driver.quit command

How can we handle web-based/window based pop-up?

Alert alert = driver.switchTo().alert();

How to mouse hover on a web element using WebDriver

What is the alternate way to click on login button

use submit() method but it can be used only when attribute type=submit.

How to perform right click using WebDriver

How do perform drag and drop using WebDriver

How to get typed text from a textbox ?

driver.findElement(By.xpath("xpath of box")).getAttribute("value"));

What are the different exceptions you got when working with WebDriver ?

ElementNotVisibleException:

Occurs if the element is not visible but still there inside the DOM

ElementNotSelectableException

NoAlertPresentException

NoSuchAttributeException

NoSuchWindowException

TimeoutException

WebDriverException

How to check if a text is highlighted on the page ?

driver.findElement(By.xpath("//a[text()='Shop']")).getCssValue("color");

driver.findElement(By.xpath("//a[text()='Shop']")).getCssValue("background-color");

How do u get the width of the textbox ?

driver.findElement(By.xpath(“xpath of textbox ”)).getSize().getWidth();

driver.findElement(By.xpath(“xpath of textbox ”)).getSize().getHeight();

How to check whether a text is underlined or not

Identify by getCssValue(“border-bottom”)

getCssValue(“text-decoration”)

Which is the super interface of webdriver

SearchContext.

How to read data from table?

You can easily read the data from table using findElements method. Find all the table cells using TD tag and then get the text inside each cell by getText() method or innerText property in HTML DOM

Can we enter text without using sendKeys() ?

WrapsDriver wrappedElement = (WrapsDriver) element;

JavascriptExecutor driver = (JavascriptExecutor)wrappedElement.getWrappedDriver();

driver.executeScript("arguments[0].setAttribute(arguments[1],arguments[2])", element, attributeName, value);

How to login into any site if its showing any authetication popup for user name and pass ?

Syntax- http://username:password@url

ex- http://creyate:jamesbond007@alpha.creyate.com

How do you send ENTER/TAB keys in WebDriver ?

use click() or submit() [submit() can be used only when type=’submit’]) method for ENTER. Or use Actions class to press keys.

For Enter-

act.sendKeys(Keys.RETURN);

For Tab-

act.sendKeys(Keys.ENTER);

What Is The Principal Difference Between “GET” And “NAVIGATE” Method

The driver.get() method waits until the page finish loading.

The driver.navigate() will only redirect and return immediately.

How To Resolve The SSL Certificate Issue (Secured Connection Error) In Firefox With WebDriver

FirefoxProfile ssl = new FirefoxProfile();

ssl.setAcceptUntrustedCertificates(true);

ssl.setAssumeUntrustedCertificateIssuer(false);

WebDriver ins = new FirefoxDriver(ssl);

isDisplayed()

isSelected()

isEnabled()

**TestNG**

How to set test case priority in TestNG

What are the annotations used in TestNG

@Test, @BeforeSuite, @AfterSuite, @BeforeTest, @AfterTest, @BeforeClass, @AfterClass, @BeforeMethod, @AfterMethod.

How do you read data from excel

What correct order of the TestNG tags are as follows

<suite>

<test>

<classes>

<class>

<methods>

What is TestNG

TestNG is a testing framework designed to simplify a broad range of testing needs, from unit testing to integration testing.

What are the advantages of TestNG

* TestNG provides parallel execution of test methods
* It allows to define dependency of one test method over other method
* It allows to assign priority to test methods
* It allows grouping of test methods into test groups
* It has support for parameterizing test cases using @Parameters annotation
* It allows data driven testing using @DataProvider annotation
* It has different assertions that helps in checking the expected and actual results
* Detailed (HTML) reports

What is the importance of testng.xml file

In a Selenium TestNG project, we use testng.xml file to configure the complete test suite in a single file. Some of the features are as follows.

* testng.xml file allows to include or exclude the execution of test methods and test groups
* It allows to pass parameters to the test cases
* Allows to add group dependencies
* Allows to add priorities to the test cases
* Allows to configure parallel execution of test cases

What is Parameterized testing in TestNG

Parameterized tests allow developers to run the same test over and over again using different values.

There are two ways to set these parameters:

using testng.xml – Practical Example

using Data Providers – Practical Example

How to create Group of Groups in TestNG

Groups can also include other groups.

These groups are called MetaGroups

For example, you might want to define a group all that includes smokeTest and functionalTest.

<groups>

<define name="all">

<include name="smokeTest"/>

<include name="functionalTest"/>

</define>

<run>

<include name="all" />

</run>

</groups>

How to exclude a particular test method from a test case execution

By adding the exclude tag in the testng.xml

<classes>

<class name="TestCaseName">

<methods>

<exclude name="TestMethodNameToExclude"/>

</methods>

</class>

</classes>

How to exclude a particular test group from a test case execution

By adding the exclude tag in the testng.xml

<groups>

<run>

<exclude name="TestGroupNameToExclude"/>

</run>

</groups>

How to disable a test case in TestNG

To disable the test case we use the parameter enabled = false

@Test(enabled = false)

How to skip a @Test method from execution in TestNG

By using throw new SkipException()

Once SkipException() thrown, remaining part of that test method will not be executed and control will goes directly to next test method execution.

PageFactory:

public class LogInPage

{

@FindBy(id="userName")

private WebElement user;

@FindBy(id="password")

private WebElement pass;

public LogInPage()

{

PageFactory.initElements(browser, this); // Setup

}

}

**FRAMEWORK QUESTIONS**

Challenges in Framework:

* Duplicate code:

The project had many category pages. Each category had a different search function instead of handling them at a central place.

* Ineffective use of wait:

I used implicit wait with a fixed timeout. But some pages were timing out due to higher load time. I’d to adopt the Explicit wait (with a variable timeout) to overcome this problem.

* Improper error handling:

It was getting hard to debug the cause of a failed test. At some places, the {try-catch} blocks were missing and hence cases were skipping w/o giving a proper message.

* Inconsistent XPath:

Most of the locators were using the XPath method. They were leading to inconsistency as the developers kept them changed while fixing new defects.

Framework explains:

* Our framework is built on top of the Page Factory framework.
* We have created a page class for every web page in my application. It keeps the objects and the handler functions.
* Every page class has a followup test class where I create tests for related use cases.
* I used separate packages to host the pages and their test classes. It’s a best practice to do that way.
* The framework also had utility for DB, excel Reading, email....
* Java is core programming language used for this project. It was primarily because the team had previous Java experience.
* We could utilize the TestNG annotations and report feature.
* We also used TestNG listner i.e. ITestListners to manage screenshoots and extended Reports
* Most test cases are data-driven. They require input from the external data source. So, I used Java property/POI class to read from the excel files.
* We used TestNG group feature for labeling test cases as P1, P2, and P3.
* The Log4J library provided the necessary support for tracing in our project.
* Instead of using the TestNG reporting, we preferred the Extent report. It has more graphical options and gives an in-depth analysis of the results.
* We built the framework with the help of Maven. Also, Jenkins provided support for automated build and execution.
* We use git for version control
* We also created Test Base class (TestBase.java) which deals with all the common functions t by all the pages. This class is responsible for loading the configurations from properties files, Initializing the WebDriver, Implicit Waits, Extent Reports and also to create the object of FileInputStream which is responsible for pointing towards the file from which the data should be read.
* We also used properties file (config.properties) which stores the information that remains static throughout the framework such as browser specific information, application URL, screenshots path etc

allowed us to manage our source code using git repositories.

* we captured and stored screenshoot in a separate folder and also the screenshots of a failed test cases will be added in the extent reports.

**JAVA**