Ans: Because it is stable.

Q8) WHAT IS THE CURRENT SELENIUM VERsion Ans: 3.12

Q9) WHY YOU ARE NOT USING THE CURRENT VERSION? Ans: Because it is not stable.

Q10) WHAT ARE THE CHALLENGES YOU FACE DURING AUTOMATION WITH THE SELENIUM?

Ans: **(First the Firefox,** then Internet Explorer two challenges you have to mention)

**Firefox // I**n my current project I am using selenium 2.53 with the Firefox version 46.0. If I want to use New version of the selenium, then to handle the Firefox I need to use GACO DRIVER // (normally WebDriver driver = Firefox Driver will not work. We have to use the Gaco driver. We have to put the set property. System. Set property then you need to put Gaco driver path and property. Like the Chrome and Internet Explorer. Gaco driver code is same as Internet Explorer code. WebDriver driver Firefox Driver that code will not work if you go to the newer version. This is the challenge I face in Firefox. (If I change to Selenium Newer version or Browser Newer version I have to use Gaco driver. Otherwise you can’t handle the Firefox.) //

**IE // Selenium** has always issue with the Internet Explorer. As an example, if I use Internet Explorer my ZOOM should be 100%. If you Zoom more than 100% then Internet Explorer will not work.

**Security issue** // If you go to Security option, there all the security should be selected, or all not selected. This is the one security issue.

**Q11) HOW YOU IDENTIFY THE OBJECT?** Ans: By Locator // (Not Xpath. Xpath is inside locator)

**Q12 WHICH LOCATOR YOU USE IN YOUR PROJECT?** Ans: Xpath.

Q13: **WHY YOU USE Xpath?** Ans: To find the Dynamic Object.

**Q 14) WHAT ARE THE XPATH METHOD?** Ans: Contains, Starts – with, Preceding Note, Following Note // (we use above Xpath method to find Dynamic Object.

**Q15) WHAT DO YOU MEAN BY DYNAMIC OBJECT?** Ans: Dynamite Object are those which Object Properties Changes Frequently.

**Q 16) HOW DO YOU FIND PROPERTIES OF THE OBJECT? / WHAT DO YOU MEAN BY PROPERTIES OF OBJECT?** Ans: I find Properties of Object from the HTML coding.

**Q17)HOW YOU IDENTIFY THE OBJECT IN SELENIUM?**

Ans: By HTML code. // (I go to HTML code, find out the Locator by this thing I identify the Object. Other words, I go to HTML code, find out the locator based on the locator I write the custom Xpath. Based on the custom Xpath I identify the Object).

**Q18) WHAT IS CUSTOM XPath?** Ans. I don’t take help from other tools. I write Xpath by myself. // (I write or create my own XPath.

**Q19) IS THIS CUSTOM XPATH HANDLE THE DYNAMIC OBJECT?** Ans: NO. IT DOESN’T. // (Dynamic Object handle by Xpath Method like: Contain, start with, Preceding Note, Following Note) My ID = Tom

Q20) HOW DO YOU WRITE XPATH FOR: My ID = Tom?

Ans: “**// [ @ ID = ‘Tom ‘]** “ // = tag name @ = Attribute ID = ID ‘Tom’ = value, Bracket = third bracket [ ]

(in Xpath we put single code. If we put double code, then Java will understand this is String, then will create problem. But we put for the whole “ // [ @ ID = ‘ Tom ‘ ] “ we told Java that this whole thing is String. I we put again double code for Tom, then Java will think this is only string. So, we put single code at Tom.)

// Double slash is, Relative Xpath (আীয়) and Relative means we are going to specific Object. We use relative Xpath. If I have some situations in my project, to overcome those situations I use relative Xpath.

/ Single slash is, Absolute Xpath - Grand Parents > Parents > Child other words, I have to go from Root to the Specific Object. That means, if grandparent change, parent change, if anywhere anything changes then you cannot identify the object. You need to maintain sequence.

Q21) What kind of challenge you face in automation or your current project or your framework???

**Ans: 1st challenge,**

Selenium is open source. Whatever is open and free there is security issue. Because it communicates with outside internet.

I use selenium Webdriver in my automation / project. Selenium is an open source, there is security issue. In Financial company and other company there is problem to get the permission. In my current project it took 3 months to get permission. My financial company they don’t like open source.

**How you overcome this thing?** Ans: To overcome this situation, we setup a server and install all open source tools there. Then cut the outside internet. we use only INTRA-NET (INTERNAL NETWORK) / company server. If company permitted I use outside internet.

**2nd challenge is Object Identification.** How you overcome this challenge?

I have good understanding of selenium and html code. I can identify any object from the html code with locator. I can write custom Xpath by myself. I don’t need any help from Firepath or Firebug. I can handle dynamic object by Xpath Method.

**Q 22) What do you mean by Dynamic Object?**

Ans: Which object value or property partially changed, it is called as a Dynamic Object.

**Q23) What do you mean by Property in html coding**? Ans: Property meaning Locator. Locator is property.

Q24)How do you handle Dynamic Object?

Ans: I know the Xpath method- contain, stars with, preceding note, following note. Using those method, I handle the Dynamic Object.

Situation:

Button id = btn 001

After 2 months property changed and came like this: Button id = btn 005 (if one part is fixed / common and other part changes is call Dynamic object. We can handle this situation by using custom method: contain, start with, preceding and following method.)

If everything change Xpath method cannot handle. Then we have discussed with the developer and tell him, please fix something for automation. ((ask him to fix at least one thing for me: ID (ID is good option, Xpath is best / but we write Xpath depending on ID) or class.)

3rd challenge SYNCHRONIZATION / speed matching between Application (browser) and automation script (selenium) speed.

**Q 25: How do you overcome Synchronization challenge?**

There is a lot of method in selenium like: implicit wait, explicit wait, fluent wait, selenium thread. Sleep, different kind of sleep- with these methods we can handle the situation easily.

Q 26: What is implicit and what is explicit? What is the difference between implicit and explicit???

Implicit is internal. It is related to html and DOM (Document Object Model) page. Synchronization wait for the html / DOM page code until it is loaded.

driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);

Explicit means external it is related to our object properties. If object properties are clickable, disable, unable, visible depends of these properties it will wait.

WebDriverWait wait=new WebDriverWait(driver, 20);

WebElement element=wait.until(ExpectedConditions.visibilityOfElementLocated (By.xpath("//\*[@id=\\\"btnLogin\\\"]")));

**Q27) In which situation or when you use implicit wait?**

When we run the automation if html code / dom page doesn't load, it takes long time to load (code will fail). To handle this situation, we use implicit wait. // Implicit is internal, related to our html code. If html code load then it will go to next. It waits until the html code load. // If we have any problem with page loading then we use implicit wait.Q28) **What is Fluent wait?**

Ans: Fluent wait same as explicit (depend on object properties-clickable, enable, disable, visible) plus exception handling.

Q29) **When you use explicit wait?**

When specific object loading slow or not loading properly, then we use explicit wait.

**When you use Fluentwait?** Ans: When we have problem with object properties and need to handle exception the we use Fluentwait.

**When you use Selenium.sleep?**

When we need every line wait until certain time then we use Selenium.sleep.

**30) When we use Thread.sleep / Timeunit.sleep?**

Ans: When we need to wait between two lines then we use Thread.sleep or Timeunit.sleep.

**4th challenge, Maintain of Automation Script:** You are doing automation, after three / six months many things could be changed then automation cannot run.

**31)How to handle this Maintenance challenge???**

Ans: Many ways we can maintain, for this reason we are using Selenium Page Object Model or Page Factory to identify the object. We use the Xpath Method to handle the dynamic object. For coding, different condition, looping we are using the Java, OOPs concept, use Maven to maintain my JAR file, Plugin, building project. If anything, project change we do Maven Update. For version and newer version, we use version control GitHub. Integrating whole together we maintain our automation script. / Combination of whole thing we maintain our script.

32) What is testing? What do you mean by testing?? Tell me testing definition???

Ans: Checking expected and actual result is testing. When the expected result and actual result doesn’t match the test fail.

**Ques: How do you rerun the failed test cases???**

Ans: Suppose, you have 100 test cases. Among them 2 test cases failed. When you fixed the two test cases. Then how can you run these two test cases out of 100

Suppose, we are using TestNG / JUnit. When we run these test cases in TestNG Suite / JUnit Suite. When we run, 98 passed 2 failed. After debugging, code review and fixing two test cases; If we go to Target Folder (where holds all TestNG report) we will see there is a file: Failed test .xml If we put our mouse on that xml then| right click | then Run as| then Run setup will show. If you go to this window | and select this xml file | then these two fail test cases will run.

**Q33) How do you handle FAIL Test Cases???** When test cases fail then how you handle the situation???

Or What is the defect criteria??? / what is defect properties???/ what is defect management???

Ques: How do you handle manually?

Ans: We handle fail test case by open a defect with:

Defect Description

Step to reproduce

URL

Screen shot

Severity and Priority.Then send it to developer. When dev fix, we test it again.

If fixed, close defect. If not, then Re-Open defect and send to the dev.

Mostly we don’t check any defect in Automation. We don’t open any defect, we DEBUG.

Mainly we do Regression testing in Automation. Sometimes we do functional testing.**Ans: What is regression testing???**

Ans: Regression testing means, same kind of t testing we are doing again and again. Regression has two parts:

1. Regression Risk, means if there is any new feature added, any new thing added, any functionality added then, I have to run those test case again.

**Risk means, new feature added.**

In my company every two month I have everything change; data change,

application change. So, I have to run the regression suit from the

automation. Because we are checking again and again every two months.

// Regression test is the first automation.2. Regression Fix means if any bug change, any defect fix, then we have

to run the regression suite again. This is call regression fix. Fix means, bug or defect fixed.

• Risk means, new feature added.

• Fix means, bug or defect fixed.**Ques: If in Automation any test cases fail then what we have to do ???**

We have to do:

Debugging & Code Review

DEBUGGING (checking the code line by line)

(First, we have read eclipse failure report at Eclipse Console. And understand which location it failed. Go to that location put a breakpoint Double clicking the mouse, it will give you breakpoint.

Then there is a Debug button in the Eclipse. Click the Debug button. Then debugging will start. Wherever the breakpoint is, it will stop there and will show the error. If you click arrow or press F6 will go to next line. Each line it will run one by one. You can check your code line by line. Which line has problem and what is the problem. If there is Null point problem or any other there is another problem, specifically which location this problem arise. You have to find out the cause. According to cause you have to handle the situation.

CODE REVIEW (if you have any compilation issue, runtime issue, any

exception issue you have handle the situation. You can review by yourself

or you can review by your team)

Q33) What is Selenium. (dot) Speed and Thread. (dot) Sleep / TIME UNIT. SLEEP (all Sleep. same)???

What is the difference between two / Selenium. Speed vs Thread. Sleep m???

EXAMPLE: Method 1…

SELENIUM.SPEED 10 SEC. (THAT MEANS, IT WILL WAIT FOR 10 SEC. IN EVERY LINE)

Method 2 …. THREAD.SLEEP 20 SEC. IT WILL SLEEP/ WAIT 20 SEC BETWEEN TWO LINES)

Method 3 ….

Method 4 …...

**Selenium Automation Questions**

**1. What is Automation Testing?**

Automation testing is the process of testing the software using an automation tool to find the defects. Automation testing tools automation testing are HP QTP/UFT, Selenium WebDriver, etc.,

**2. What are the benefits of Automation Testing?** 1) **Saves time and money**. It is faster in execution.2) **Reusability of code**. Create one time and execute multiple times with less or no maintenance.3)**Easy reporting**. It generates automatic reports after test execution.4**) Easy** for compatibility testing. It enables parallel execution in the combination of different OS and browser environments. 5)It is cheaper compared to manual testing in a long run.6)Maximum coverage. It helps to increase the test coverage.7) It is more reliable

**3. What type of tests have you automated?**

Our main focus is to automate test cases to do Regression testing, Smoke testing, and Sanity testing. Sometimes based on the project and the test time estimation, we do focus on End to End testing.

**4. How many test cases you have automated per day?**

It depends on Test case scenario complexity and length. I did automate 2-5 test scenarios per day when the complexity is limited. Sometimes just 1 or fewer test scenarios in a day when the complexity is high.

**5) Why do you prefer Selenium Automation Tool?**

1)Free and open source 2)Have large user base and helping communities 3)Cross browser compatibility 4)Platform compatibility 5)Multiple programming languages support

**6. Is it possible to automate the captcha using Selenium?**

No, It’s not possible to automate captcha and bar code reader.

**7.) List some scenarios which we cannot automate using Selenium WebDriver?**

**1)** Windows based application is not supported by Selenium webdriver.

2) Bitmap comparison Is not possible using Selenium WebDriver

3)Automate Captcha elements is not possible using Selenium WebDriver

4)We can not read bar code using Selenium WebDriver

5) windows OS based pop ups , 5. third party calendars/**element 6.** Image ,7. Word/PDF

**Framework in Selenium**

**8). What is a Framework?**

A framework is **a set of rules** or best practices which we can follow in a systematic way to achieve the desired results. **It is a set of steps in** the component that we have defined and we combined all these components and each and every component is doing somethings extra or doing their own work. Let’s see we have created TestNG, we have page layer, Test layer, we have created Configuration environment variable, reporting structure, utilities, all these things are component of this particular Frame work. And we integrate all these components is called Framework.

There are different types of automation frameworks and the most common ones are: 1)Data Driven Testing Framework 2) Keyword Driven 3) Hybrid Testing Framework

**9). Have you created any Framework? How to make framework from your scratch?**

**Yes** I have created the framework from the scratch as well as I have contributed on the existing framework also. Or

**NO-** I haven’t created the framework from the scratch but I have contributes a lot. I have contributed in terms of like creating a library, creating the test cases , ,my team lead or senior automation engineer we are crating the utilities and libraries for us and top of that I am creating test scenarios, I’m writing TestNg classes, TestNg scenarios , and preparing test data for that I am writing.

**Framework from the scratch**

I have created the BDD framework from the scratch. In that case I use Maven project with required dependencies. There are three steps to make the Framework. First of all I can say About **Feature file**(login.feature),In feature file I write the test scenario and Scenario outline with Gherkin keywords. **Then Step Definition file** ,this file will be in java. In Step Definition file we have to copy each and every steps of test scenario from the login.feature file and paste it here with Special Characters. So that Cucumber can understand this particular line and stating with @ annotation and Gherkin keyword and for each and every annotation we have to write one method name. **[we use**

**Java, Selenium and annotations**.] **And then Test Runner Class,** Inside the test Runner class we don’t need to write anything. Just above the Test Runner class We will write here@ Runwith(Cucumber.class), and@ Cucumber option which is coming from cucumber.API , inside the Cucumber options I will write feature keyword to locate the path of the feature file, I use glue keyword to locate step definition class and I use other syntax like format to generate the good report and html report.

So this the BDD cucumber framework.

**10) Can you explain the Framework which you have used in your Selenium Project?**

There are different types of Testing. Like -**Data Driven Testing**-When we are driving the data from may be some Excel sheet or some different data source is called Data Driven Testing.

**Keyword Driven Testing**—In the form of keyword we have defined the scenario that is called keyword driven.I don’t prefer to use keyword driven because keyword driven required lots of effort and maintainance. So keyword driven with selenium is not good option. But Keyword driven with QTP is very famous. **Hybrid Driven Testing**- It is a combination of different approach.It is like we have Data driven approach, keyword driven,liner approach, we have modular. The combination of all together is called hybrid driven testing.

**Selenium-Definition, Components and Locators**

**11).What is Selenium?** Selenium is an open source (free) automated testing suite to test web applications.

**Advantage-1) It** supports different platforms and browsers.Like F.F,Chrome,safari,IE. It support multiple language like java, Rubi, python etc. 3**) It is open source** and free to use without any licensing costs.**Tools**–HP,QTP(Quick Test Professional)AKA,HP,UFT(Unified Functional Testing),Selenium webdriver.

**Components -**It ha**s four** components namely,

i     Selenium IDE (Integrated Development Environment)

ii    Selenium RC (Remote Control) – selenium 1

iii   Selenium WebDriver – selenium 2 & 3 and iv ) Selenium Grid

**12. What is Selenium IDE? Which is the only browser that supports Selenium IDE to be used?**

Selenium IDE (Integrated Development Environment) is a Firefox plugin. **It is the simplest** framework in the Selenium Suite. **It provides record** and playback features. **Using this** component non programmer can also write automation scripts. **Firefox is the only browser that supports selenium IDE.** we can create scripts using Selenium IDE.

**13. What is Selenium RC?**

Selenium RC AKA Selenium 1. It was the main Selenium project for a long time before the WebDriver merge brought up Selenium 2**. It is still actively supported** (in maintenance mode). **It relies** on JavaScript for automation. **It supports Java,** Javascript, Ruby, PHP, Python, Perl and C#. It supports almost every browser out there.

**14. What is Selenium WebDriver?**

Selenium WebDriver AKA Selenium 2. **It is a browser** automation framework that accepts commands and sends them to a browser. **It is implemented** through a browser-specific driver. **It controls the browser** by directly communicating with it. It supports Java, C#, PHP, Python, Perl, Ruby. . **Even though we can create scripts** using Selenium IDE, we need to use Selenium RC or Selenium WebDriver to write more advanced and robust test cases.

**15) What are the types of WebDriver APIs available in Selenium?**

•   Firefox Driver •Gecko Driver •InternetE xplorer Driver •Chrome Driver•   HTMLUNIT Driver

•   Opera Driver •Safari Driver •Android Driver •iPhone Driver •EventFiringWebDriver

**16. Which WebDriver implementation claims to be the fastest?**

The fastest implementation of WebDriver is the HTMLUnitDriver. It is because the HTMLUnitDriver does not execute tests in the browser.

**17. What are the Programming Languages supported by Selenium WebDiver?**

•   Java •C# •Python •Ruby • Perl •   PHP

**18. What are the Operating Systems supported by Selenium WebDriver?**

•   Windows •   Linux•   Apple

**19. What are the Open-source Frameworks supported by Selenium WebDriver?** •   Junit •   TestNG •   CUCUMBER•   JBHEAVE

**20. What is Selenium Grid? And its advantage?** Selenium Grid is a tool used together with Selenium RC to run tests on different machines against different browsers in parallel. It helps in parallel and distributes testing. In simple words, it is used to distribute the test execution on multiple platforms and environments concurrently.

**the advantages of Selenium Grid-** It allows running test cases in parallel thereby saving test execution time. It allows multi-browser testing. It allows us to execute test cases on multi-platform.

**Selenium-Definition, Components and Locators**

**21) When do you use Selenium Grid?** It can be used to execute same or different test scripts on multiple platforms and browsers concurrently so as to achieve distributed test execution.

**22). What is a hub in Selenium Grid? What is a node in Selenium Grid?**

A hub is a server or a central point that controls the test executions on different machines.

**Node is the machine** which is attached to the hub. There can be multiple nodes in Selenium Grid.

**23. What are the Locators available in Selenium?**

Different types of locators are: 1   ID – 2   ClassName – 3   Name – 4   TagName – 5   LinkText – 

6  PartialLinkText – 7   XPath – 8   CSS Selector – 

**Question- Can we test API’s or web services using selenium web driver?**

No. Selenium webdriver uses browser’s native methods to automate the web applications. Since web services are headless, we can not automate web services using selenium selenium driver.

**Selenium wait**

**24. What are the types of waits available in Selenium WebDriver?**

In Selenium we could see flowing types of waits such as Implicit Waits, Explicit Waits and Fluent Waits.

• **Implicit Waits –** It will tell the web driver to wait for certain amount of time before it throws a ” NoSuchElementException”. The default setting is zero.Once we set the time , web Driver will wait for that time before throwing an Exception.

**Syntax-driver.manage().timeouts().implicitwait(timeout,timeUnit,SECONDs);**

**It contain**

**1**) Implicitly wait, 2) Page load time out and 3)Set Script time out.

**a) Implicitlywait—** WebDriver driver = new FirefoxDriver();

dr.mange().timeouts().**Impilcitlywait**(10,Timeout.SECONDS);

**b) Pageloadtimeout-** WebDriver driver = new FirefoxDriver();

dr.mange().timeouts().**Pageloadtimeout**(100,SECONDS);

**c) Set Script time out-** WebDriver driver = new FirefoxDriver();

dr.mange().timeouts().**SetScripttimeout** (100,SECONDS);

**•Explicit Waits**–It is used to tell to the webDriver to wait for certain conditions (Expected Conditions) or the maximum time exceeded before throwing an “ElementNotVisibleException”. It can be applied only for specified elements. Once we declare explicit wait we have to use “Expected conditions”, or we can configure how frequently we want to check the condition using Fluent wait. It gives better options than the implicit wait as it will wait for dynamically loaded Ajax Elements. **It contain**

1. Thread.sleep wait – Thread.sleep(miliseconds)- Thread. Sleep(1000);
2. WebDriver wait -- WebDriverWait wait = new WebDriverWait(driver,10); and
3. Fluent wait --

**WebDriver wait—**It is one of the Explicit waits. It can be applied only for specified elements. It is applied on certain element with defined expected condition and time. And this wait can also throw exception when element is not found.

**•Fluent Waits**- can define the maximum amount of time to wait for a specific condition and frequency with which to check the condition before throwing an “ElementNotVisibleException” exception. In Fluent waits , we can change the default polling period based on our requirements.

**25. What are the different exceptions you have faced in Selenium WebDriver?**

•   WebDriverException,•TimeoutException •NoAlertPresentException •   NoSuchWindowException

•   NoSuchElementException•   StaleElementReferenceException• IllegalStateException

**Selenium - Assert and Verify , Selenese, Verification points 29, , Switch, Connect to Database,WebDriver Syntax---**

**26. What is the difference between Assert and Verify in Selenium**? In TestNG we use only Assert statements, we can use verify statements in terms of if-else and try-catch.

Both assert and verify commands are used to find whether a given input is present or not on the webpage.

**Assert:** If the assert condition is true then the program control will execute the next test step but if the condition is false, the execution will stop and further test step will not be executed.

**Overcome—**To overcome this issue we use soft Assert in TestNG and we also use try catch block.

**Verify:** When a ‘verify’ command fails, the test will continue executing and logging the failure. Mostly the verify command is used to check non-critical things.

|  |  |
| --- | --- |
| 1  2  3 | WebDriver driver = new FirefoxDriver();  instead of creating  FirefoxDriver driver = new FirefoxDriver(); |

|  |  |
| --- | --- |
| 1 | driver.findElement(By.linkText(“Software Testing Material Website”)).click(); |

|  |
| --- |
|  |

|  |  |
| --- | --- |
| 1 | driver.get("http://www.softwaretestingmaterial.com"); |

|  |  |  |  |
| --- | --- | --- | --- |
| 3  1 | 4   boolean elePresent = driver.findElement(By.xpath("xpath")).isDisplayed(); |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 3  1 | 4   boolean eleSelected= driver.findElement(By.xpath("xpath")).isSelected(); |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 3  1 | 4   boolean eleEnabled= driver.findElement(By.xpath("xpath")).isEnabled(); |  |  |

**27. What are Soft Assert and Hard Assert in Selenium?**

**Soft Assert:** It is a type of Assertion that does not throw an exception immediately when an assert statement fails and would continue with the next test step after the assert statement

**Hard Assert:** Hard Assert throws an Assert Exception immediately when an assert statement fails and continues with the next test step in the test suite.

**28) What is Selenese?** Selenese is the language which is used to write test scripts in Selenium IDE.

**29). What are the verification points available in Selenium?**

In Selenium IDE, we use Selenese Verify and Assert Commands as Verification points.

In Selenium WebDriver, there is no built-in features for verification points. It totally depends on our coding style. some of the Verification points are **To check for page title, To check for** certain text, To **check for** certain element (text box, button, drop down, etc.)

**30). How to switch between frames in Selenium?**

By using the following code, we could switch between frames. driver.switchTo().frame();

**31). How to connect a Database in selenium?**

We use JDBC Driver to connect the Database in Selenium (While using Java Programming Language).

Selenium is a tool to automate User Interface. We could only interact with Browser using Selenium WebDriver.

**32. Explain the line of code Webdriver driver = new FirefoxDriver(); ?**

**‘WebDriver‘** is an interface, **driver** is a reference variable and **FirefoxDriver()** is a contructor, **new** is a keyword. And **new FirefoxDriver() is** an object of FirefoxDriver class .

**Resize,launch a browser, F.F Interface and super, Search context, dr. reference variable, read a JavaScript**

**33.) How To Resize Browser Window Using Selenium WebDriver?**

To resize the browser window to particular dimensions, we use ‘Dimension’ class to resize the browser window.

        // object of Dimensions class

        Dimension d = new Dimension(480,620);

        //Resize the current window to the given dimension

        driver.manage().window().setSize(d);

**34. How to launch a browser using Selenium WebDriver?**

WebDriver is an Interface. We create Object of a WebDriver Interface. And F.F, Chrome driver,IE, safari they are class of Webdriver interface.

<2.53 – no geckodriver,3.x – geckodriver for FF

To launch Firefox Driver:-WebDriver driver = new FirefoxDriver();

To launch Chrome Driver: WebDriver driver = new ChromeDriver();

To launch Internet Explorer Driver: WebDriver driver = new InternetExplorerDriver();

**35. Is the FirefoxDriver a Class or an Interface? What is the super interface of WebDriver**

a)FirefoxDriver is a Java class, and it implements the WebDriver interface.

b)SearchContext. It is extended by the webDriver interface. All the abstract methods of Search context and webdriver interfaces are implemented in Remote WebDriver Class.

**36. We do create a reference variable ‘driver’ of type WebDriver**

WebDriver driver = new FirefoxDriver(); instead of creating FirefoxDriver driver = new FirefoxDriver(); **What is the purpose of doing this way?**

If we create or define driver as a webDriver, Switching will be very easy, because webDriver driver can implement any browser and we can get all the methods and it helps to test on multiple browser.

//FirefoxDriver driver = new FirefoxDriver();

ChromeDriver driver = new ChromeDriver();

driver.get(“http://www.google.com”);

WebDriver driver = new FirefoxDriver();

**Note** Firefox Driver is a class and it implements all the methods of webdriver interface. Using this statements, we can run our scripts only on Firefox browser.

**37. How to read a JavaScript variable in Selenium WebDriver?**

By using JavascriptExecutor

// To initialize the JS object.

JavascriptExecutor JS = (JavascriptExecutor) webdriver;

// To get the site title.

String title = (String)JS.executeScript("return document.title");

System.out.println("Title of the webpage : " + title);

**Selenium Input text,Clear the text,get text, get attribute, Click on Hyperlink, submit a form, press ENTER key, pause a test**

**37 -a. How to input text in the text box using Selenium WebDriver?**

By using sendKeys() method - -WebDriver driver = new FirefoxDriver();

driver.get("https://www.gmail.com");

driver.findElement(By.xpath("xpath")).sendKeys("test");

**38. How to input text in the text box without calling the sendKeys()?**

// To initialize JavaSripts object

JavascriptExecutor JS = (JavascriptExecutor)driver;

// To enter username

JS.executeScript("document.getElementById(‘User').value=test.com'");

**39. How to clear the text in the text box using Selenium WebDriver?**

By using clear() method

WebDriver driver = new FirefoxDriver();

driver.get("https://www.gmail.com");

driver.findElement(By.xpath("xpath\_of\_element1")).sendKeys("Software Testing Material Website");

driver.findElement(By.xpath("xpath\_of\_element1")).clear();

**40. How to get a text of a web element?** By using getText() method

**41. How to get an attribute value using Selenium WebDriver?** By using getAttribute(value);

**42. How to click on a hyperlink using Selenium WebDriver?**

We use click() method in Selenium to click on the hyperlink

driver.findElement(By.linkText(“Software Testing Material Website”)).click();

**43. How to submit a form using Selenium WebDriver?**

We use “submit” method on element to submit a form

driver.findElement(By.id("form\_1")).submit();

Alternatively, you can use click method on the element which does form submission

**44. How to press ENTER key on text box In Selenium WebDriver?**

To press ENTER key using Selenium WebDriver, We need to use Selenium Enum Keys with its constant ENTER.

driver.findElement(By.xpath("xpath")).sendKeys(Keys.ENTER);

**45. How to pause a test execution for 5 seconds at a specific point?**

By using java.lang.Thread.sleep(long milliseconds) method we could pause the execution for a specific time. To pause 5 seconds, we need to pass parameter as 5000 (5 seconds)

Thread.sleep(5000)

**Command, alternative to driver, navigate back and forth, fetch the current page, maximize browser, delete cookies, refresh a browser**

**46. What happens if I run this command. driver.get(“www.softwaretestingmaterial.com”) ;**

An exception is thrown. We need to pass HTTP protocol within driver.get() method.

driver.get("http://www.softwaretestingmaterial.com");

**47. What are the different types of navigation commands?**

Refer above question (Can I navigate back and forth in a browser) **48. How to run Selenium WebDriver Test from the command line?**

Class A{

}

cd c

c: javac A.java

c: java A.java

java org.testng.TestNG C:\Users \Desktop\ \workspace\testing\testng.xml

**49. What is the alternative to driver.get() method to open an URL using Selenium WebDriver?**

Alternative method to driver.get(“url”) method is driver.navigate.to(“url”)

**50. Can I navigate back and forth in a browser in Selenium WebDriver?**

We use Navigate interface to do navigate back and forth in a browser. It has methods to move back, forward as well as to refresh a page.

driver.navigate().forward(); – to navigate to the next web page with reference to the browser’s history

driver.navigate().back(); – takes back to the previous webpage with reference to the browser’s history

driver.navigate().refresh(); – to refresh the current web page thereby reloading all the web elements

driver.navigate().to(“url”); – to launch a new web browser window and navigate to the specified URL

**51. How to fetch the current page URL in Selenium?**

To fetch the current page URL, we use getCurrentURL() --driver.getCurrentUrl();

**52. How can we maximize browser window in Selenium?**

We use maximize() method. This method maximizes the current window if it is not already maximized

driver.manage().window().maximize(); **53. How to delete cookies in Selenium?**

To delete cookies we use deleteAllCookies() method

driver.manage().deleteAllCookies();

**54. What are the ways to refresh a browser using Selenium WebDriver?**

There are multiple ways to refresh a page in selenium

•   Using driver.navigate().refresh()

•   Using driver.get(“URL”) on the current URL or using driver.getCurrentUrl()

•   Using driver.navigate().to(“URL”) on the current URL or driver.navigate().to(driver.getCurrentUrl());

•   Using sendKeys(Keys.F5) on any textbox on the webpage

**Selenium Server, capture Screenshot, hidden elements, Object Repository, Recovery Scenario, Upload a file, Broken Links, WindowHandl,get and navigate,**

**55. Is Selenium Server needed to run Selenium WebDriver Scripts?**

When we are distributing our Selenium WebDriver scripts to execute using Selenium Grid, we need to use Selenium Server.

**56. How to capture Screenshot in Selenium WebDriver?**

By using TakesScreenshot Interface. In Selenium 3, we may face few issues while capturing Screenshots. To overcome we use a Shot utility.

**57. How to handle hidden elements in Selenium WebDriver?**

It is one of the most important selenium interview questions.

We can handle hidden elements by using javaScript executor

(JavascriptExecutor(driver)).executeScript("document.getElementsByClassName(ElementLocator).click();");

**58. What is Object Repository in Selenium WebDriver?**

Object Repository is used to store element locator values in a centralized location instead of hard coding them within the scripts. We create a property file (.properties) to store all the element locators and these property files act as an object repository in Selenium WebDriver.

**59. How can you use the Recovery Scenario in Selenium WebDriver?**

By using “Try Catch Block” within Selenium WebDriver Java tests.

try {

     driver.get("www.xyz.com");

}catch(Exception e){

     System.out.println(e.getMessage());}

**60. How to Upload a file in Selenium WebDriver?**

There are two cases which are majorly used to upload a file in Selenium WebDriver such as using

1) SendKeys Method and using 2) AutoIT Script.

Browser Button – type =“file”

SendKeys (c:\\test\\naveen.jpg);

**61. How to Download a file in Selenium WebDriver?**

By using AutoIT script, we could download a file in Selenium WebDriver.

**62. How can you find Broken Links in a page using Selenium WebDriver?**

**63. What is the difference between driver.getWindowHandle() and driver.getWindowHandles() in Selenium WebDriver?**

driver.getWindowHandle() – It returns a handle of the current page (a unique identifier)

driver.getWindowHandles() – It returns a set of handles of all the pages available.

**64. What is the difference between driver.get() and driver.navigate.to(“url”)?**

dr.get(url) - driver.get(): To open an URL and it will wait till the whole page gets loaded

driver.navigate.get(): To navigate to an URL and It will not wait till the whole page gets loaded

1. .It does not maintain the browser history and cookies but dr.navigate.to(url)

maintain browser history and cookies.

1. You can’t move forward and backward between the pages with dr.get() but you can so like this with dr.navigate().

Move backward and forwards- 1) dr.navigate().forward(); 2) dr.navigate().back();

**Driver.close, quite, findElement/s, read test data,Select dropdown**

**65. What is the difference between driver.close() and driver.quit() methods?**

Purpose of these two methods (driver.close and driver.quit) is almost same. Both allow us to close a browser but still, there is a difference.

driver.close(): To close current WebDriver instance

driver.quit(): To close all the opened WebDriver instances

**66. What is the difference between driver.findElement() and driver.findElements() commands?**

Both of them are used to find elements in the current web page matching to the specified locator value.

**driver.findElement**()-It finds the first matching elements within the current webpage using the specified locator value.It returns a single WebElement (found first) based on the locator passed as parameter. **Syntax of findElement()-**

WebElement textbox = driver.findElement(By.id(“textBoxLocator”)); Whereas

**driver.findElements()** – It finds all the matching elements within the current webpage. Itreturns

a list of WebElements, all satisfying the locator value passed.  **Syntax of findElements**()-

•   List <WebElement> elements = element.findElements(By.id(“value”));

**67. How to find whether an element is displayed on the web page?**

WebDriver facilitates the user with the following methods to check the visibility of the web elements. These web elements can be **buttons, drop boxes, checkboxes, radio buttons, labels e**tc.

1   isDisplayed()

boolean elePresent = driver.findElement(By.xpath("xpath")).isDisplayed();

1   isSelected()

  boolean eleSelected= driver.findElement(By.xpath("xpath")).isSelected();

1   isEnabled()

   boolean eleEnabled= driver.findElement(By.xpath("xpath")).isEnabled();

**68. How do you read test data from excels?**

Test data can be read from excel sheet using- JXL or POI API. POI API has many advantages than JXL.

JXL API-It stands for Java excel API .It is used API for executing Selenium Data Driven tests which allows user to read, write, create and modify sheets in a Excel(.XLS) workbook at run time. It is not supported for .xlsx format.

**69. How to select a value in a dropdown?**

By using Select class

WebElement mySelectElement = driver.findElement(By.name("dropdown"));

Select dropdown = new Select(mySelectElement);

dropdown.selectByVisibleText(Text);

dropdown.selectByIndex(Index);

dropdown.selectByValue(Value);

**…………….**

**Note-** Mouse over, Right click(Context click),Double Click, Drag and Drop, etc action in selenium webdriver can be done using Action Class.

**POI API-** is a set of library files that gives an API to manipulate Microsoft documents like .xls and .xlsx which allows to create, modify, read and write data into Excel.

1. dr.get(url) -It does not maintain the browser history and cookies but dr.navigate.to(url)

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**Web based pop-up, windows based, Authentication Pop-Up, more than one web element, mouse hover, Scroll,Right.double,Highlight,drag and drop and POI API**

**70. How can we handle web based pop-up?**

To handle alerts popups we need to do switch to the alert window and call Selenium WebDriver Alert API methods. Hints—Alert pop🡪 Alert Window🡪 Call Alert API methods

**71. How can we handle windows based pop up?**

Selenium doesn’t support windows based applications. It is an automation testing tool which supports only web application testing. We could handle windows based popups in Selenium using some third party tools such as AutoIT, SIKULI, Robot class etc.

**72. How To Login Into Any Site If It Is Showing Any Authentication Pop-Up For Username And Password?**

To do this we pass username and password with the URL--<http://username:password@url>, e.g. [http://admin:admin123@xyz.com](http://admin:admin123@xyz.com/)

**73. How to find more than one web element in the list?**

// To store the list

List <WebElement> eleList = driver.findElements(By.xpath("xpath"));

// To fetch the size of the list

int listSize = eleList.size();

//for loop

for (int i=0; i<listSize; i++)

{

                  // Clicking on each link

                  links.get(i).click();

                  // Navigating back to the previous page that stores the links

                  driver.navigate().back();}

**74. How to mouse hover on a web element using WebDriver?**

By using Actions class

WebElement ele = driver.findElement(By.xpath("xpath"));

//Create object 'action' of an Actions class

Actions action = new Actions(driver);

//Mouseover on an element

action.moveToElement(ele).build().perform();

**75. How To Scroll Web Page Down Or UP Using Selenium WebDriver?**

JavaScript scrollBy() method scrolls the document by the specified number of pixels.

**76. How To Perform Right Click Action (Context Click) In Selenium WebDriver?**

We use Actions class in Selenium WebDriver to do Right-Click (Context Click) action.

          action.contextClick(driver.findElement(By.xpsjht()).build().perform();

**77. How To Perform Double Click Action In Selenium WebDriver?**

We use Actions class to do Double click action in selenium.

**78. How To Perform Drag And Drop Action in Selenium WebDriver?**

We use Actions class to do Drag And Drop Action

**79. How To Highlight Element Using Selenium WebDriver?**

By using JavascriptExecutor interface, we could highlight the specified element

**Note-** Mouse over, Right click(Context click),Double Click, Drag and Drop, etc action in selenium webdriver can be done using Action Class.

**POI API-** is a set of library files that gives an API to manipulate Microsoft documents like .xls and .xlsx which allows to create, modify, read and write data into Excel.

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1. You can’t move forward and backward between the pages with dr.get() but you can so this with dr.navigate().

‘’’

**9). Have you created any Framework? How to make framework from your scratch?**

**Yes** I have created the framework from the scratch as well as I have contributed on the existing framework also. Or

**Framework from the scratch**

I have created the BDD framework from the scratch. In that case I use Maven project with required dependencies. There are three steps to make the Framework.

First of all I can say About **Feature file**(login.feature),In feature file I write the test scenario and Scenario outline with Gherkin keywords.

**Then Step Definition file** ,this file will be in java.

* In Step Definition file we have to copy each and every steps of test scenario from the login.feature file and paste it here with Special Characters.
* So that Cucumber can understand this particular line and stating with @ annotation and Gherkin keyword and for each and every annotation we have to write one method name. **[we use Java, Selenium and TestNg annotations**.]

**And then Test Runner Class,** Inside the test Runner class we don’t need to write anything.

* Just above the Test Runner class We will write here@ Runwith(Cucumber.class), and@ Cucumber option which is coming from cucumber.API , inside the Cucumber options I will write feature keyword to locate the path of the feature file,
* I use glue keyword to locate step definition class and I use other syntax like format to generate the good report and html report.

So this the BDD cucumber framework.

**………………………..**

**NO-** I haven’t created the framework from the scratch but I have contributes a lot. I have contributed in terms of like creating a library, creating the test cases , ,my team lead or senior automation engineer we are crating the utilities and libraries for us and top of that I am creating test scenarios, I’m writing TestNg classes, TestNg scenarios , and preparing test data for that I am writing.