

Q1)What is Selenium.

>It an API,which helps us to automate the UI of an application

Q2)Does Selenium support automation of pages Made in PHP and HTML.

>No,Selenium is an independent of language in which application is made.

Q3)Does selenium support automation of application made in only java.

>No,Selenium is an independent of language in which application is made.(JAVA,C#,C++)

Q4)Does selenium support desktop application automation

>No

Q5)Does selenium has execution engine.

>No,required TestNG,Junit for testcase execution

Q6)Does selenium has excel reading methods

>No,Apche POI library

Q7)What are the limitations of Selenium?

> Selenium supports testing of only web based applications

Mobile applications cannot be tested using Selenium

Captcha(during registration) and Bar code 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 though the user can find numerous helping communities.

User is expected to possess prior programming language knowledge.

Q8)What are the different types of locators in Selenium?

ID

ClassName

Name

TagName

LinkText

PartialLinkText

Xpath

CSS Selector

Q9)What is selenium Grid?

>help us to do parallel testing and distribute load from one system to another

>helps to execute scripts on other m/c

>one system as Master(Hub) and slave(Node system)

Q)why there is requirement of waits in selenium?

>to handle sync issue between elements.

-Sometimes an application will not able to load elements due to below issues.

-Network issue

-Application issues

Q)what is the default timeout in Selenium is.

>Default timeout is ZERO.

Q10) What does mean by implicitlyWait

> implicit waits will be in place for the entire time the browser is open.(all the elements)

>driver.manage().timeouts().implicitlyWait(60, TimeUnit.SECONDS);

Q11) What does mean by expliciteWait

>wait for particular element on the page.

WebDriverWait wait = new WebDriverWait(driver, 10);

WebElement element = wait.until(ExpectedConditions.elementToBeClickable(By.id(>someid>)));

Q) What is polling interval

>WebDriverWait wait1 = new WebDriverWait(driver, 60);

wait1.pollingEvery(5, TimeUnit.SECONDS);

wait.until(ExpectedConditions.elementToBeSelected(driver.findElement(By.xpath(""))));

Q)What is FluentWait

>Wait<WebDriver> wait = new FluentWait<WebDriver>(driver).withTimeout(60,

SECONDS).pollingEvery(2, SECONDS).ignoring(NoSuchElementException.class);

WebElement foo = wait.until(new Function<WebDriver, WebElement>() {

public WebElement apply(WebDriver driver) {

return driver.findElement(By.id("foo"));

});

Q)What is thread.sleep ?

sleeping script for fixed time

Q)What is pageLoadTimeout?

>Purpose: Sets the amount of time to wait for a page load to complete before throwing an error. If the timeout is negative, page loads can be indefinite.

driver.manage().timeouts().pageLoadTimeout(100, SECONDS);

Q) How to enter data in text box

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

Q)How to click on link

>driver.findElement(By.xpath("")).click();

Q)How to check element is displayed or not

>try {

// driver.findElement(By.xpath("")).isDisplayed();

// return true;

// } catch (Exception e) {

// return false;

// }

Q)How to check checkbox is selected or not

```
>driver.findElement(By.id("")).isSelected();  
>driver.findElement(By.id("")).getAttribute("class").contains("checked");
```

Q)What is method to find element on UI

>Using findElement function();

Q)What is method to find all elements on UI

>Every link starts from Anchor tag
>driver.findElements(By.tagName("//a")).size();

Q)How to get URL of current window

```
>driver.getCurrentUrl();
```

Q)How to get title of page

```
>driver.getTitle();
```

Q)How to get window id on run time

Q)How to handle multiple window

```
>public static void main(String[] args) {  
    WebDriver driver = new FirefoxDriver();  
  
    Set<String> windowId = driver.getWindowHandles();  
    Iterator<String> itr = windowId.iterator();  
    ArrayList<String> ids = new ArrayList<String>();  
    while(itr.hasNext()){  
        ids.add(itr.next());  
    }  
  
    driver.switchTo().window(ids.get(3));  
    driver.findElement(By.xpath("")).isDisplayed();  
    driver.close();  
  
    driver.switchTo().window(ids.get(2));  
  
    driver.close();  
  
    driver.switchTo().window(ids.get(0));
```

Q)How to maximize window

```
>driver.manage().window().maximize();
```

Q)How to get co-ordinate of window

```
Point position = driver.manage().window().getPosition();  
position.getX();  
position.getY();
```

```
Point location = driver.findElement(By.xpath("")).getLocation();
```

```
location.getX();  
location.getY();
```

Q)How to do mouse over

>Actions Class

```
Actions action = new Actions(driver);  
action.moveToElement(driver.findElement(By.xpath(""))).build().perform();
```

Q)How to do Right click on page or on a specific element?

```
Actions action= new Actions(driver);  
action.contextClick(WebElement).build().perform();
```

Q)How to do drag drop

Actions class

```
Actions action1 = new Actions(driver);  
    WebElement source = driver.findElement(By.xpath(""));  
    WebElement target = driver.findElement(By.xpath(""));  
    action1.dragAndDrop(source, target);  
  
    action1.build().perform();
```

Q)How to do double click

```
>action2.moveToElement(driver.findElement(By.xpath("))).doubleClick();
```

Q)How Keys class works

>through keys class.it has all keyboard operations

```
action2.sendKeys(Keys.ENTER);  
action2.sendKeys(Keys.F6);
```

Q)How to work with alert/How can we handle web based pop up?

>Alert interface

```
Alert alert = driver.switchTo().alert();  
alert.accept();  
alert.dismiss();
```

Q)How to work with iframe

```
driver.findElements(By.tagName("iframe")).size();  
driver.switchTo().frame(0);  
driver.switchTo().frame("auto");  
driver.switchTo().frame(driver.findElement(By.className("")));
```

Q)How to work with select/dropdowns

```
Select select = new Select(driver.findElement(By.xpath("")));
select.selectByIndex(1);
select.selectByValue("valuseName");
select.selectByVisibleText("textName");
```

```
select.deselectAll();
select.deselectByIndex(3);
select.deselectByValue("valuseName");
select.deselectByVisibleText("textName");
```

Q)How to execute java script

>JavascriptExecutor is an interface which is available in package
org.openqa.selenium.JavascriptExecutor;

Inside this Interface we have some predefined method called executeScript()- so whatever script you will pass as a String It will be executed by JavascriptExecutor.

Note- This is the most common question in the interview that how to type in Selenium without using the sendKeys method.

for Scrolling:-

```
((JavascriptExecutor)driver).executeScript("scroll(0,400)");
```

```
jsx.executeScript("window.scrollBy(450,0)", ""); //scroll up
```

```
>((JavascriptExecutor)driver).executeScript("document.getElementById('some id').value='mukesh'");
>((JavascriptExecutor)driver).executeScript("document.getElementById('enter your element id').click();");
```

Q)How to work with properties file/object repository?

```
Properties testdata =new Properties();
```

```
File file = new
```

```
File(System.getProperty("user.dir")+"/src/main/java/Maven/automation_project/Config/testdata.properties");
```

```
FileInputStream filereader=new FileInputStream(file);
```

```
testdata.load(filereader);
```

```
System.out.println(testdata.getProperty("userName"));
```

Q #133) How to check if a text is highlighted on the page ?

To identify weather color for a field is different or not-

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

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

```
System.out.println(color);
```

```
System.out.println(bgcolor);
```

Here if both color and bgcolor different then that means that element is in different color.

Q #135) 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();
```

Q #136) How do u get the attribute of the web element ?

driver.findElement(By.tagName("img")).getAttribute("src") will give you the src attribute of this tag.
Similarly, you can get the values of attributes such as title, alt etc.

Similarly you can get CSS properties of any tag by using getCssValue("some property name").

Q) What are the java script function for selenium object location?

```
//following-sibling  
//preceding-sibling  
//starts-with()  
//ends-with()  
//following  
//preceding  
// contains-//a[contains(text(),'Women']
```

Q) How many test script do you write

>if page methods are designed: 7 to 8 scripts

>Long scenario : 1 to 2 scripts end to end (homepage-->order)

Q)What are your role and responsibilities

- 1.Involved in evaluating Selenium for Web UI Automation
- 2.Involved in designing and implementing a Selenium web Driver automation framework built using Selenium web Driver + TestNG as Execution Engine.
- 3.Involved in designing automation scripts.
- 4.Performed automated Regression testing, in coordination with manual testing team.
- 5.Updated and maintained various test artifacts in the Test Automation Framework depending on the changes required.

Q)How many team members you have in your team

4

Q)Is it possible to automate in sprint

Yes,first we will.if there is no bug we can automate

Q)How do you execute test scripts

TestNG,Jenkins,batfile

Q)what is source code management you use

>github

>

?Q)Do you do parallel testing

Through TestNG

```
<suite name="basicAnnotations" parallel="classes" thread-count="3">
```

Q)what is you challenge in automation

>handling dynamic elements

>challenge was to write methods,so that our methods dont fail when there is a change in UI

>The way framework is choosen,design,flexible enough,proper structure

Q)What are the methods of excel reader

```
public static void main(String[] args) throws IOException {  
  
    FileInputStream fis;  
    XSSFWorkbook workbook;  
    XSSFSheet sheet;  
    XSSFRow row;  
    XSSFCell cell;  
  
    fis = new FileInputStream("/src/main/java/com/automation/fb/data/text.xls");  
    workbook = new XSSFWorkbook(fis);  
  
    int index = workbook.getSheetIndex("LoginTest");  
    sheet = workbook.getSheetAt(index);  
  
    row = sheet.getRow(0);  
  
    row.getLastCellNum();  
  
    row.getLastCellNum();  
  
    cell = row.getCell(3);  
  
    if (cell.getCellType() == Cell.CELL_TYPE_STRING) {  
        cell.getStringCellValue();  
    } else if (cell.getCellType() == Cell.CELL_TYPE_NUMERIC) {  
        String.valueOf(cell.getNumericCellValue());  
    } else if (cell.getCellType() == Cell.CELL_TYPE_BOOLEAN) {  
        String.valueOf(cell.getBooleanCellValue());  
    }  
}  
  
}
```

Q) What are the benefits of Automation Testing?

-Reduces the time of regression

-Supports execution of repeated test cases

-Enables parallel execution

-Improves accuracy thereby reducing human generated errors

-Saves time and money

Q #3) Why should Selenium be selected as a test tool?

- 1.is free and open source
- 2.have a large user base and helping communities
- 3.have cross Browser compatibility (Firefox, chrome, Internet Explorer, Safari etc.)
- 4.have great platform compatibility (Windows, Mac OS, Linux etc.)
- 5.supports multiple programming languages (Java, C#, Ruby, Python, Pearl etc.)

Q #4) What are the different Selenium components?

Selenium (IDE) – Selenium IDE is a record and playback tool.

Selenium Remote Control (RC) – Selenium RC is a server that allows user to create test scripts in a desired programming language. It also allows executing test scripts within the large spectrum of browsers.

- requires server
- semi-object oriented
- don't support Listeners

Selenium WebDriver – WebDriver is a different tool altogether that has various advantages over Selenium RC. WebDriver directly communicates with the web browser and uses its native compatibility to automate.

- do not requires server
- complete -object oriented
- support Listeners

Selenium Grid – Selenium Grid is used to distribute your test execution on multiple platforms and environments concurrently.

Q #5) What are the testing types that can be supported by Selenium?

Functional Testing

Regression Testing

Q #6) What are the limitations of Selenium?

Following are the limitations of Selenium:

Selenium supports testing of only web based applications

Mobile applications cannot be tested using Selenium

Captcha and Bar code readers cannot be tested using Selenium

Reports can only be generated using third party tools like TestNG .

User is expected to possess prior programming language knowledge.

Q #11)What is difference between assert and verify commands?

Assert: Assert command checks whether the given condition is true or false. Let's say we assert whether the given element is present on the web page or not. If the condition is true then the program control will execute the next test step but if the condition is false, the execution would stop and no further test would be executed.

Verify: Verify command also checks whether the given condition is true or false. Irrespective of the condition being true or false, the program execution doesn't halt i.e. any failure during verification would not stop the execution and all the test steps would be executed.

Q #13) What is the difference between "/" and "/" in Xpath?

Single Slash "/" – Single slash is used to create Xpath with absolute path i.e. the xpath would be created to start selection from the document node/start node.

Double Slash "/" – Double slash is used to create Xpath with relative path i.e. the xpath would be created to start selection from anywhere within the document.

Q #15) When should I use Selenium Grid?

Selenium Grid can be used to execute same or different test scripts on multiple platforms and browsers concurrently so as to achieve distributed test execution, testing under different environments and saving execution time remarkably.

Q #16) What do we mean by Selenium 1 and Selenium 2?

Selenium RC and WebDriver, in a combination are popularly known as Selenium 2. Selenium RC alone is also referred as Selenium 1.

Q #17) How do I launch the browser using WebDriver?

The following syntax can be used to launch Browser:

```
WebDriver driver = new FirefoxDriver();
```

```
WebDriver driver = new ChromeDriver();
```

```
WebDriver driver = new InternetExplorerDriver();
```

Q #18) What are the different types of Drivers available in WebDriver?

The different drivers available in WebDriver are:

FirefoxDriver

InternetExplorerDriver

ChromeDriver

SafariDriver

OperaDriver

AndroidDriver

IPhoneDriver

HtmlUnitDriver

Q #19) How to type in a textbox using Selenium?

User can use sendKeys("String to be entered") to enter the string in the textbox.

Syntax:

```
WebElement username = drv.findElement(By.id("Email"));  
// entering username  
username.sendKeys("sth");
```

Q #20) How can you find if an element is displayed on the screen?

isDisplayed()

isSelected()

isEnabled()

Syntax:

isDisplayed():

```
boolean buttonPresence = driver.findElement(By.id("gbqfba")).isDisplayed();
```

isSelected():

```
boolean buttonSelected = driver.findElement(By.id("gbqfba")).isDisplayed();
```

isEnabled():

```
boolean searchIconEnabled = driver.findElement(By.id("gbqfb")).isEnabled();
```

Q #21) How can we get a text of a web element?

Syntax:

```
String Text = driver.findElement(By.id("Text")).getText();
```

Q #23) What are the different types of navigation commands?

Following are the navigation commands:

navigate().back() – The above command requires no parameters and takes back the user to the previous webpage in the web browser's history.

Sample code:

```
driver.navigate().back();
```

navigate().forward() – This command lets the user to navigate to the next web page with reference to the browser's history.

Sample code:

```
driver.navigate().forward();
```

navigate().refresh() – This command lets the user to refresh the current web page there by reloading all the web elements.

Sample code:

```
driver.navigate().refresh();
```

`navigate().to()` – This command lets the user to launch a new web browser window and navigate to the specified URL.

Sample code:

```
driver.navigate().to("https://google.com");
```

Q #24) How to click on a hyper link using `linkText`?

```
driver.findElement(By.linkText("Google")).click();
```

The command finds the element using link text and then click on that element and thus the user would be re-directed to the corresponding page.

The above mentioned link can also be accessed by using the following command.

```
driver.findElement(By.partialLinkText("Goo")).click();
```

Q #26) When do we use `findElement()` and `findElements()`?

`findElement()`: `findElement()` is used to find the first element in the current web page matching to the specified locator value. Take a note that only first matching element would be fetched.

Syntax:

```
WebElement element = driver.findElements(By.xpath("//div[@id='example']/ul/li"));
```

`findElements()`: `findElements()` is used to find all the elements in the current web page matching to the specified locator value. Take a note that all the matching elements would be fetched and stored in the list of `WebElements`.

Syntax:

```
List <WebElement>elementList = driver.findElements(By.xpath("//div[@id='example']/ul/li"));
```

Q #28) What is the difference between `driver.close()` and `driver.quit` command?

`close()`: close only the current instance

`quit()`: close all the instances associated with driver

Q #38)How to set test case priority in TestNG?

Setting Priority in TestNG Code Snippet

```
packageTestNG;
importorg.testng.annotations.*;
publicclassSettingPriority {
```

```

    @Test(priority=0)
    publicvoidmethod1() {
    }
    @Test(priority=1)
    publicvoidmethod2() {
    }
    @Test(priority=2)
    publicvoidmethod3() {
    }
}

```

Q #40)What are the advantages of Automation framework?

Advantage of Test Automation framework

- Reusability of code
- Maximum coverage
- Recovery scenario
- Low cost maintenance
- Minimal manual intervention
- Easy Reporting

Q #41) What are the different types of frameworks?

Below are the different types of frameworks:

Module Based Testing Framework: The framework divides the entire “Application Under Test” into number of logical and isolated modules. For each module, we create a separate and independent test script. Thus, when these test scripts taken together builds a larger test script representing more than one module.

Library Architecture Testing Framework: The basic fundamental behind the framework is to determine the common steps and group them into functions under a library and call those functions in the test scripts whenever required.

Data Driven Testing Framework: Data Driven Testing Framework helps the user segregate the test script logic and the test data from each other. It lets the user store the test data into an external database. The data is conventionally stored in “Key-Value” pairs. Thus, the key can be used to access and populate the data within the test scripts.

Keyword Driven Testing Framework: The Keyword driven testing framework is an extension to Data driven Testing Framework in a sense that it not only segregates the test data from the scripts, it also keeps the certain set of code belonging to the test script into an external data file.

Hybrid Testing Framework: Hybrid Testing Framework is a combination of more than one above mentioned frameworks. The best thing about such a setup is that it leverages the benefits of all kinds of associated frameworks.

Behavior Driven Development Framework: Behavior Driven Development framework allows automation of functional validations in easily readable and understandable format to Business Analysts, Developers, Testers, etc.

Q #44) What is the difference between Selenium and QTP?

Selenium	QTP
open source	paid
web based app	window+web
supports multiple languages	only VB script

Q #52) Does automation testing have any disadvantages?

Designing the tools and tests to run software through takes a lot of manual, human effort, though there are frameworks and tests ready made for engineers to use. Even with automated testing, human error is still a factor – tools can be buggy, inefficient, costly, and sometimes even technologically limited in what kinds of tests they can run on their own.

Q #54) How do you choose which automation tool is best for your specific scenario?

In order to choose the proper automation testing tool, you must consider:

- the scope of the project
- the limitation of the tool
- how much the tool costs
- the tool's usability and convenience
- the testing environment
- compatibility

Q #55) What are the different types of scripting techniques for automation testing?

Test automation scripting techniques include key and data driven techniques, shared, structured, and linear.

Q #56) What is the Selenium WebDriver?

The Selenium WebDriver is used for automating tests for websites.

Q #59) How can we get the font size, font colour, font text used for the particular text on the web page use in the selenium?

By using `getCSSValue("font-size");`

It's like that `driver.findElement(By.id()).getCSSValue("font-size");`

It's like that `driver.findElement(By.id()).getCSSValue("font-colour");`

It's like that `driver.findElement(By.id()).getCSSValue("font-type");`

It's like that `driver.findElement(By.id()).getCSSValue("background-colour");`

Q #61) How to clear cache using selenium?

There is multiple ways to delete the cookies

1: `driver.manage().deleteAllCookies();`

Q #66) How to Kill all the browser at the same time?

We are using the .bat file in this we used "taskkill" command which work on the cmd

`taskkill /F /IM IEDriverServer.exe /T`

`taskkill /F /IM chromedriver.exe /T`

`taskkill /F /IM iexplore.exe /T`

`taskkill /F /IM firefox.exe /T`

`exit`

Q #68) In XPath, I wants to do partial match on attribute value from beginning. Tell me two functions using which I can do It.

We can use bellow given two functions with XPath to find element using attribute value from beginning.

`contains()`

`starts-with()`

Where to use these:

- When we do not have complete knowledge about the web elements HTML properties
- When the values of the attributes are dynamic i.e. changing
- When we would like to create a list of web elements containing same partial attribute value

BY Attributes:

`driver.findElement(By.xpath("//input[contains(@name,'user_name')]")).sendKeys("admin");`

By Text():

```
driver.findElement(By.xpath("//a[contains(text(), 'Marketing')]")).click();
```

```
<a href="index.php?module=Campaigns&action=index&parenttab=Marketing">Marketing</a>
```

Starts-with()

starts-with() method is used when we know about the initial partial attribute value or initial partial text associated with the web element. User can also use this method to locate web elements those are consist of both the static(initial) and dynamic(trailing) values.

By Attribute

- //a[starts-with(@id,'link-si')]
- //a[starts-with(@id,'link-sign')]

Q #71) How to accept exceptions in testNG?

using the @Test(expectedExceptions = ArithmeticException.class, NullPointerException.class)

Q #72) I have used findElements In my test case. It Is returning NoSuchElementException when not element found. Correct me If I am wrong.

It Is Incorrect. findElements will never return NoSuchElementException. It will return just an empty list.

Q #73) My Firefox browser Is not Installed at usual place. How can I tell FirefoxDriver to use It?

If Firefox browsers Is Installed at some different place than the usual place then you needs to provide the actual path of Firefox.exe file as bellow.

```
System.setProperty("webdriver.firefox.bin","C:\\Program Files\\Mozilla Firefox\\Firefox.exe");
```

```
driver =new FirefoxDriver();
```

Q #75) Can we run testNG class code without using any TestNg annotation?

No, you have to add one "@Test" annotation compulsory.

Q #78) Describe the differences between JUnit and TestNG unit testing frameworks.

-TestNG support group test @Test(group ={sanity})

TestNG support

Extra Annotations @BeforeTest, @AfterTest,@BeforeSuite, @AfterSuite,@BeforeGroups, @AfterGroups which are not supported in JUnit.

-Test prioritizing and parallel testing is possible in TestNG only

-Test case dependencies can be set

Q #80) What are different annotations supported by TestNG ?

@Test
@Parameters
@BeforeMethod
@AfterMethod
@BeforeClass
@AfterClass
@BeforeSuite
@AfterSuite
@BeforeTest
@AfterTest
@BeforeGroups
@AfterGroups
@DataProvider
@Listeners

Q #81) What Is the usage of testng.xml file?

to run multiple tests from single file

In selenium WebDriver, We are using testng.xml file to configure our whole test suite In single file.

Can pass parameter to use In test case.

Can specify group dependencies.

Can configure parallel test execution.

Can define listeners

Q #83) I have a test case with two @Test methods. I want to exclude one @Test method from execution. Can I do It? How?

```
>@Test(enabled=false)
>
<classes>
<class name="Your Test Class Name">
<methods>
<exclude name="Your Test Method Name To Exclude"/>
</methods>
</class>
</classes>
```

Q #84) Tell me syntax to skip @Test method from execution

```
@Test(enabled=false)
```

Q #85) Arrange bellow give testng.xml tags from parent to child.

```
<test>
<suite>
<class>
</methods>
</classes>
```


Parent to child arrangement for above testng tags is as bellow.

```
<suite>
<test>
</classes>
<class>
</methods>
```

Q #86) How to set priority of @Test method? What is its usage?

@Test(priority=0)

Q #87) Tell me any 5 assertions of TestNG which we can use in selenium webdriver

Assert.assertEquals(actual, expected);

assertTrue

assertFalse

#88) Can you tell me usage of TestNG Soft Assertion?

Using TestNG soft assertion, we can continue our test execution even if assertion fails. That means on failure of soft assertion, remaining part of @Test method will be executed and assertion failure will be reported at the end of @Test method.

//Created object of testng SoftAssert class to use its properties.

SoftAssert s_assert = new SoftAssert();

//Text on expected side is written incorrect intentionally to get fail this assertion.

s_assert.assertEquals(Actualtext, "Tuesday, 01 January 2014", "1st assert failed.");

System.out.println("Soft Assertion -> 1st pagetext assertion executed.");

Q #116) What is the alternate way to click on login button?

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

Q #89) How to write regular expression in testng.xml file to search @Test methods containing "product" keyword.

Regular expression to find @Test methods containing keyword "product" is as bellow.

```
<methods>
<include name=".*product.*"/>
</methods>
```

Q #92) What is Parallelism/cross browser in TestNG?

In general software term, Parallelism means executing two part of program simultaneously or executing program simultaneously or we can say multithreaded or parallel mode. TestNG has same feature using

which we can start multiple threads simultaneously In parallel mode and test methods will be executed In them.

we can give parallelism on the basis of method/suite/class

```
<suite name="Suite" parallel="tests" thread-count="3">
```

```
<test name="FirefoxTest">
```

```
<parameter name="browser" value="firefox" />
```

```
<classes>
```

```
<class name="com.grid.MultiBrowser" />
```

```
</classes>
```

```
</test>
```

```
<test name="ChromeTest">
```

```
<parameter name="browser" value="chrome" />
```

```
<classes>
```

```
<class name="com.grid.MultiBrowser" />
```

```
</classes>
```

```
</suite>
```

Q #93) What Is dependency test In TestNG?

Dependency Is very good feature of testng using which we can set test method as dependent test method of any other single or multiple or group of test methods. That means depends-on method will be executed first and then dependent test method will be executed. If depends-on test method will fail then execution of dependent test method will be skipped automatically. TestNG dependency feature will works only If depends-on test method Is part of same class or part of Inherited base class.

```
public class Dependent {  
  
    @Test (dependsOnMethods = { "OpenBrowser" })  
  
    public void SignIn() {  
  
        System.out.println("This will execute second (SignIn)");  
  
    }  
}
```

```

@Test

public void OpenBrowser() {

    System.out.println("This will execute first (Open Browser)");

}

@Test (dependsOnMethods = { "SignIn" })

public void LogOut() {

    System.out.println("This will execute third (Log Out)");

}

```

Q #95) Can we use implicitly wait() and explicitly wait() together in the test case?

No. we should not

Before using the explicitly wait(), reset the implicitly wait() by using the below code.
Create a method for the explicitly wait():

```

Public void explicitlyWaitForWebElement(WebDriver driver, WebElement we){
driver.manage().timeouts().implicitlywait(0, TimeUnit.SECONDS); // nullify the time
WebDriverWait wait = new WebDriverWait(driver, 10);
Wait.until(ExpectedConditions.presenceOfElementLocated(we));
driver.manage().timeouts().implicitlywait(DEFAULT_WAIT_4_PAGE, TimeUnit.SECONDS); // reset the
time
}

```

Q #97) What is cookies?

Cookies are text files retained on computers by browsers containing various information in regards to a specific website visit.

Cookies are used to identify users, store shopping cart information, and prepare customized web pages that utilize user information. The cookie may be used to remember a username, help you resume where you left off, for example, so that the name will auto-fill on the user's next visit

Q #99) What types of Models choose while designing the framework?

Most commonly use models are:

Behavioral Driven Development
Page Object Model

Q #101) What are the selenium exception you faced?

>NoSuchElementException:Thrown when element could not be found.

To handle this, use wait either implicit or explicit

>ElementNotVisibleException:Thrown when an element is present on the DOM, but it is not visible, and so is not able to be interacted with.

NoAlertPresentException:Thrown when switching to no presented alert.

NoSuchWindowException:Thrown when window target to be switched doesn't exist.

NoSuchFrameException:Thrown when frame target to be switched doesn't exist

ElementNotSelectableException:Thrown when trying to select an unselectable element.

Q #102) How to use @DataProvider annotation in TestNG?

When you use @DataProvider annotation for any method that means you are using that method as a data supplier. Configuration of @DataProvider annotated method must be like it always return Object[][] which we can use in @Test annotated method.

```
public class DataProviderTest {

    private static WebDriver driver;

    @DataProvider(name = "Authentication")

    public static Object[][] credentials() {

        return new Object[][] { { "testuser_1", "Test@123" }, { "testuser_1", "Test@123" } };

    }

    // Here we are calling the Data Provider object with its Name

    @Test(dataProvider = "Authentication")

    public void test(String sUsername, String sPassword) {

        driver = new FirefoxDriver();

        driver.findElement(By.id("log")).sendKeys(sUsername);

        driver.findElement(By.id("pwd")).sendKeys(sPassword);

    }

}
```

Q #110) How to switch on the given URL in multiple windows handle?

First find all the windows handle and then save it in the Iterator and then check the url of every windows and then switch.

Q #119) How do you launch IE/chrome browser?

Before launching IE or Chrome browser we need to set the System property.

To open IE browser ? `System.setProperty("webdriver.ie.driver","path of the iedriver.exe file ");`

`WebDriver driver = new InternetExplorerDriver();`

To open Chrome browser ? `System.setProperty("webdriver.chrome.driver","path of the chromeDriver.exe file ");`

`WebDriver driver = new ChromeDriver();`

Q #122) Give the example for method overload in WebDriver.

`frame(string), frame(int), frame(WebElement).`

Q #125) What is the difference between `findElement` and `findElements`?

Both methods are abstract method of `WebDriver` interface and used to find the `WebElement` in a web page.

`findElement()` – it used to find the one web element. It return only one `WebElement` type.

`findElements()`- it used to find more than one web element. It return List of `WebElements`.

Q #128) How to get the number of frames on a page ?

`List <WebElement> framesList = driver.findElements(By.xpath("//iframe"));`

`int numOfFrames = frameList.size();`

Q #139) What is the use of `getOptions()` method ?

`getOptions()` is used to get the selected option from the dropdown list.

Q #140) What is the use of `deselectAll()` method ?

It is used to deselect all the options which have been selected from the dropdown list.

Q #141) Which is the super interface of `webdriver` ?

`SearchContext`.

Q #148) How to switch back from a frame ?

use method `defaultContent()`.

Syntax – `driver.switchTo().defaultContent();`

Q #149) How to type text in a new line inside a text area ?

Use \n for new line.

ex- `webelement.sendKeys("Sanjay_Line1.\n Sanjay_Line2.");`

it will type in text box as

Sanjay_Line1.

Sanjay_Line2.

Q #152) How to press Shift+Tab ?

```
String press = Keys.chord(Keys.SHIFT,Keys.TAB);
webelement.sendKeys(press);
```

Q #154) What is the difference b/w `getWindowHandles()` and `getWindowHandle()` ?

`getWindowHandles()`- is used to get the address of all the open browser and its return type is `Iterator<String>`.

`getWindowHandle()`- is used to get the address of the current browser where the control is and return type is `String`.

Q #157) How to check all checkboxes in a page ?

```
List<WebElement> chkBox = driver.findElements(By.xpath("//htmltag[@attbute='checkbox']"));
for(int i=0; i<=chkBox.size(); i++){
    chkBox.get(i).click();
}
```

Q #158) Count the number of links in a page.

use the locator `By.tagName` and find the elements for the tag `//a` then use loop to count the number of elements found.

Syntax- `int count = 0;`

```
List<WebElement> link = driver.findElements(By.tagName("a"));
```

```
System.out.println(link.size()); // this will print the number of links in a page.
```

Q #163) What are the different attributes for `@Test` annotation?

`alwaysRun`, `dataProvider`, `dependsOnMethods`, `enabled`, `expectedExceptions`, `timeOut` etc.

ex- `@Test(expectedExceptions = ArithmeticException.class),`

`@Test(timeOut = 2000).`

Q #169) What is the difference between `thread.Sleep()` and `selenium. Set Speed ("2000")`?

If the application is taking time to load the page then we use `selenium.waitForPageLoad(" ")`. This command is doesn't wait upto the given time whenever the page load is completed.

If the application is taking time to refresh the page, then we use `Thread. Sleep ()`. it is a standard wait it simply wait to the given time.

`selenium.setSpeed`

Takes a single argument in string format

Ex: `selenium.setSpeed("2000")` – will wait for 2 seconds

Runs each command in after `setSpeed` delay by the number of milliseconds mentioned in `set Speed`.
`thread.sleep`

Takes a single argument in integer format

ex: `thread. Sleep(2000)` – will wait for 2 seconds

Waits for only once at the command given at sleep.

Q #170) In what situation selenium finding element get fails?

- Element loading issue
- Dynamic id of web element

Q #171) How we can retrieve the dynamically changing Ids?

It can be handled through customized xpath

`preceding-sibling`

`following-sibling`

`contains method`

`starts-with() method`

Q #188) How to handle colors in web driver?

Use `getCssValue(arg0)` function to get the colors by sending 'color' string as an argument.

Example

```
String col = driver.findElement(By.id(locator)).getCssValue("color");
```

Q #194) How to disable cookies in browser.

Using `deleteAllVisibleCookies()` in selenium

Q #203) Detail about TestNG Test Output folder.

It is the directory where reports are generated. Every time tests run in a suite, TestNG creates `index.html` and other files in the output directory.

Q #204) In frame if no frame Id as well as no frame name then which attribute I should consider throughout our script.

You can go like this.....`driver.findElements(By.xpath("//iframe"))...`

Then it will return List of frames then switch to each and every frame and search for the locator which you want then break the loop.

Q #215) Write down scenarios which we can't automate?

Barcode Reader, Captcha etc.

Q #29) Can Selenium handle windows based pop up?

Selenium is an automation testing tool which supports only web application testing. Therefore, windows pop up cannot be handled using Selenium.

Q #123) How do you upload a file?

1>using send keys method

```
element.sendKeys("C:\\Users\\Easy\\Desktop\\testfile.txt");
```

2>using robot class

```
WebDriver driver = new FirefoxDriver();
```

```
driver.get(URL);
```

```
WebElement element = driver.findElement(By.name("uploadfile"));
```

```
element.click();
```

```
StringSelection stringSelection = new StringSelection(C:kumar\\guru\\avikash);
```

```
Toolkit.getDefaultToolkit().getSystemClipboard().setContents(stringSelection, null);
```

```
Robot robot = new Robot();
```

```
robot.keyPress(KeyEvent.VK_CONTROL);
```

```
robot.keyPress(KeyEvent.VK_V);
```

```
robot.keyRelease(KeyEvent.VK_V);
```

```
robot.keyRelease(KeyEvent.VK_CONTROL);
```

```
robot.keyPress(KeyEvent.VK_ENTER);
```

```
robot.keyRelease(KeyEvent.VK_ENTER);
```

3)using 3rd party tool(AUTO IT)

Q #150) What is the use of AutoIT tool ?

Some times while doing testing with selenium, we get stuck by some interruptions like a window based pop up. But selenium fails to handle this as it has support for only web based application. To overcome this problem we need to use AutoIT along with selenium script. AutoIT is a third party tool to handle window based applications. The scripting language used is in VBScript.

Q #172) What is the basic use of Firefox profiles and how can we use them using selenium?

A profile in Firefox is a collection of bookmarks, browser settings, extensions, passwords, and history; in short, all of your personal settings. We use them to change user agent, changing default download directory, changing versions etc.

Q #173) Customize the name of file going to be downloaded?

You have to download AUTO IT.exe file and has to be install and later you have create .au3 file (in this file you have to specify the commands in

VB script like your file name, where have to save, it will be easy may be 3 or 4 steps) using AUTOIT...then right click the .au3 file you have to compileafter that you will get the .exe file with the name of .au3 file ..In eclipse you will give the code like this

```
<--ProcessBuilldderps = new ProcessBuilder("path of the .exe file of au3") .start();-->
```

Q #34) How to capture screenshot in WebDriver?

OR use of listener classes?

>ITestListener is an interface,after imolementing it provides us various methods such as onTestFailure,nTestStart,nTestSuccess

Code

```
<>
if(!result.isSuccess())
{
String userDir = System.getProperty("user.dir");
String customDir = "\\screenshots\\";
String screenShotName = userDir+customDir+new SimpleDateFormat("MM-DD-YYYY-HH-MM").format(new GregorianCalendar().getTime())+"-"+result.getMethod().getMethodName()+ ".png";
// Code to capture the screenshot
File srcFile=((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
try
{
// Code to copy the screenshot in the desired location
FileUtils.copyFile(srcFile,new File(screenShotName));
```

WebDriver has provided us one interface TakesScreenshot for capturing the screenshot of web application and This interface provides one method names as getScreenshotAs() to capture screenshot in instance of driver. This getScreenshotAs() method takes argument of type OutputType.File or OutputType.BASE64 or Output.BYTES. So that it could return captured screenshot in File type, or Base 64 string type or in raw bytes.

So this would look like this

Q>Executing failed testcases in Selenium Project?

> using testng-failed.xml in test-output folder

>using interface "IRetryAnalyzer" .it has one method "retry"

"IAnnotationTransformer" interface "IAnnotationTransformer" method

Q #142) How to enter text without using sendkeys() ?

Yes we can enter text without using sendKeys() method. We have to use combination of javascript and wrapper classes with WebDriver extension class, check the below code-

```
public static void setAttribute(WebElement element, String
attributeName, String value)
{
WrapsDriver wrappedElement = (WrapsDriver) element;
JavascriptExecutor driver = (JavascriptExecutor)
wrappedElement.getWrappedDriver();
driver.executeScript("arguments[0].setAttribute(arguments[1],
arguments[2])", element, attributeName, value);
}
```

call the above method in the test script and pass the text field attribute and pass the text you want to enter.

Q)How to read and write in excel?

Reading:-

```
// Specify the path of file
File src=new File("filepath/excelsheetname.xlsx");

// load file
FileInputStream fis=new FileInputStream(src);

// Load workbook
XSSFWorkbook wb=new XSSFWorkbook(fis);

// Load sheet- Here we are loading first sheetonly
XSSFSheet sh1= wb.getSheetAt(0);

// getRow() specify which row we want to read.

// and getCell() specify which column to read.
// getStringCellValue() specify that we are reading String data.

// here createCell will create column

// and setCellValue will set the value

String value      = s.getRow(rowNum).getCell(cellNum).getStringCellValue(); // read data
s.getRow(rowNum).getCell(cellNum).setCellValue();                          //write data
FileOutputStream fos = new FileOutputStream("path of file");
wb.write(fos);
```

Q) Explain the Selenium Architecture

Selenium webdriver architecture mainly divided into three parts

Language binding: To support multiple languages, selenium people has developed language bindings. If you want to use the browser driver in Java, use the Java bindings for Selenium Webdriver. If you want to use the browser driver in C#, Ruby or Python, use the binding for that language. All language binding can be downloaded from selenium official website.

Selenium Webdriver: It is an API which makes possible to communication between programming languages and browsers. It follows object oriented concepts. It has multiple classes and interfaces.

Browser drivers: A browser driver can be considered as a personal secretary of a boss. A browser drivers helps in communication with browser without revealing the internal logic of browser's functionality. The browser driver is the same regardless of the language used for automation.

CUCUMBER BDD

1> Create a feature file having single or multiple Test Scenarios

In this file we will create actual scenarios in plain english language with using gherkin keywords

Feature: Login Action

Scenario: Successful Login with Valid Credentials

Given User is on Home Page
When User Navigate to Login Page
And User enters UserName and Password
Then Message displayed Login Successfully

Scenario: Successful Logout

When User Logout from the Application
Then Message displayed Logout Successfully

2> Write TestRunner and execute the same.

Create a runner package and write corresponding runner class to test class and run

After running few methods will get generated on console and give error
`@Cucumber.Options(features="features", glue={"stepDefinition"})`

3> Create a stepdefinitions package and write corresponding steps definition class to test class

Copy all the the methods from console and write and now we will write actual coding here only

4> Execute Test Runner class

Database integration with Selenium:-

<>We will create 3 test cases in single Test class(get,insert,update)

These are the simple steps which we will follow in our program

Step 1- First Load the driver

Step 2-Then Create a connection with JDBC drivers

Step 3- Then Create a statement object

Step 4- Then Execute your SQL query

Step 5- And Store the data in Result set

Step 6- Finally verify whether data (table) is updated or not

Xpath example :

```
//a[@class='quick-view-mobile']/ancestor::div[@class='quick-view-wrapper-mobile']/preceding-sibling::a[@class='product_img_link']
```