SELENIUM

1. Which programming language is supported by Selenium Webdriver?

The following programming languages are supported by selenium webdriver

Java

C#

Python

Ruby

JavaScript

2. Tell me webDriver supported browsers?

The following browsers are supported:

Firefox

Internet Explorer

Safari

Opera

Chrome

Edge

Headless browsers like HTMLUnitDriver&PhantomJS

3) what are the benefits of automation testing?

- fast test execution: manual testing process is time consuming. automation tests are faster and take less time to execute tests compared to manual test execution

- Re-usability of test cases: you need to prepare automation test cases only one time.then you can use same test cases for all upcoming version release of software application. however you need to modify your test cases if there is any flow change or business logic changes in software. but it is less time consuming.

- Testing cost reduction: you have to put human efforts only one time to automate your test process. later on automation tool will work for you at place of human resource.reduction of cost involved in testing

- Better test coverage in each version release: you have to implement test cases. later on you can execute same test cases in all upcoming release. so each scenario will be tested in every version release.

- easy for performing compatibility testing:: it is easy to run same tests in combination of different os and browser environments using automation tools (parallel testing)

3. components of selenium?

- selenium IDE(integrated development environment):it is a firefox add-on which allows you to record and playback your tests in firefox browser.

- selenium RC: it is web application automation tool which allows you to write your tests in many different programming languages.
- selenium web driver: it is well designed object oriented API developed to automate web and mobile application testing process. you can write your tests in different languages too in selenium web driver.
- selenium grid: grid allows you to execute your tests in parallel by distributing them on different machine having different browser/os combinations

4. Difference between selenium webdriver and selenium RC?

selenium web driver	selenium RC
communicates directly to the browser	needs selenium RC server to be running
browser interaction is more realistic	browser interaction is less realistic (can access disabled elements/text box)
web driver is faster than selenium RC since it speaks directly to the browser .	RC is slower since it uses a javascript program called selenium core is the one that directly contr browser not you.

it uses the browser's own engine to control it	
web driver API is more concise	RC API contains redundant and confusing comm
web driver supports Html unit browser	RC does not support Html unit browser
web drivers supports listeners	RC does not support listeners
web driver supports of moving mouse cursor	RC does not support of moving mouse cursors.
web driver support to test iphone/android applications	RC does not support to test iphone/android appli

5. the only drawbacks of web driver over RC are?

selenium web driver	selenium RC
web driver cannot readily support new browsers	RC can readily support new browsers
web driver has no builtin command that automatically	RC has built-in test result generator.

selenium RC automatically generates an Html fil |

generates a test results file.	

6. what are the prerequisites to run selenium web driver?

JDK, Eclipse OR IntelJ, Selenium webdriver jars, browsers & web application.

7. the package which is to be imported while working with web driver?

org.openqa.selenium

8. web driver has built in object repository. correct me if i am wrong?

No. webdriverdonot have any built in object repository till now.

But user can store all the object locators into the external files (ex: Excel, .properties file, DB etc) & use them in the scripts.

9. I prefer to use selenium web driver because

- it has multi -os support
- it has multi-Browser support
- it has multi-language support
- it has multi-locator types support.
- web as well as mobile application testing support.
- it supports moving mouse cursors
- it is extendable and flexible
- doesn't require starting server before executing the test script

- many testers are using selenium web driver to automate their testing process.so getting solution of any complex issue very easily on internet.
- continuous support from web driver's development team to improve the API and resolve current issues.
- we can achieve parallel execution across different OS and browsers

10.   which operating systems support selenium web driver?

- windows-windows xp, windows 7, windows 8 and windows 8.1
- apple os x
- linux -ubuntu,other versions of linux should support too

11.   which open source unit framework is supported in web driver with java?

- junit
- TestNG

12.   which different element locators supported by selenium web driver?

The following locators are supported

1. id   Ex: oBrowser.findElement(By.id("id"))

2. name   Ex: oBrowser.findElement(By.name("name"))

3. className   Ex: oBrowser.findElement(By.className("class"))

4. tagName   Ex: oBrowser.findElement(By.tagName("tag"))

5. linkText   Ex: oBrowser.findElement(By.linkText("linkText"))

6. partialLinkText   Ex:
oBrowser.findElement(By.partialLinkText("partialLinkText"))

7. xpath   Ex: oBrowser.findElement(By.xpath("xpath"))

8. cssSelector   Ex:
oBrowser.findElement(By.cssSelector("cssSelector"))

13.   what are xpath and its use?

XPath is defined as XML path. It is a syntax or language for finding any element on the web page using XML path expression. **XPath** is used to find the location of any element on a webpage using HTML DOM structure.

1. It is used to find the elements in HTML DOM

2. Easy to identify the complex and dynamic element sin the page.

3. It travels in all the directions (Left, Right, Top, Bottom)

14.   which tool you are using to find the Xpath of any element?

In firefox browser (until version 45) fire bug, fire path & fire finders are used to write the xpath.

But in the latest firefox browser versions (46 onwards) we don't find these tools.

In chrome also using Dev Tool (F12) also we can write the xpath

15.   what is firebug (F12)?

used to inspect the html elements of the web application under test.it's like object spy in OTP.

16.   what is firepath?

used to identify the Xpath of the various web element.

17.   Difference between / and //?

- single slash (/) start selection from the document node(root path)
- it allows you to create 'absolute" path expressions
- Eg: html/body/div/form/input
- Double slash (//) start selection anywhere in the document (current path)
- it enables to create "relative" path expressions
- Eg: //input [@ name = 'pwd(_name)']

18.   what is the difference between absolute xpath and relative xpath?

absolutexpath: absolute xpath is the full path starting from root node and ends with desired descendant element's node. it will start using single forward slash (/) as below:

- example of absolute xpath for a table:
- html/body/div[1]/div[7]/section[2]/div[1]/table

- above xpath is absolute xpath for table.It starts top node html and ends with table node'

  relativexpath:instead of starting from root node, relative xpath starts from anywhere in between node or current element's node(last node of element). it will start using double forward slash(//) as below.

- example of relative xpath for a table:
- //div[7]/section[2]/div[1]/table
- abovexpath is relative xpath of same table.

19.   give me any five different xpath syntax to locate below given input?

user name Text box for facebook application:

<input id = "email" class="inputtext" type="email" tabindex="1" value="" name="email"/>

Five Xpath syntax for above element are as below

//input[@id='email']

//input[contains(@name,'email')]

//input[starts-with(@class,"inputtext")]

//input[@type='email' or @tabindex='email']

//input[starts-with(@id, 'email') and contains(@class, 'inputtext')]

20.   inxpath,. how to do partial match on attribute value from beginning.

we can use below given two functions with xpath to find element using attribute value from beginning

- contains()
- starts - with() .

21.   how will you handle dynamic elements?

by writing relative xpath

22.   which one is better xpath or css?

xpath

23.   xpath of sibling input element which is after div in the DOM?

//div/following-sibling::input

24.   css selector sibling input element which is after div in the DOM?

- css selector path will looks like below:
- css=div+input

25.   difference between find elements( ) and find elements( ) ?

find element ( ):

- it returns only one web element.
- it will find the first matching element.
- driver find element ("attribute");by xpath("attribute");

find elements( )

- it returns list of elements.
- it will find all the matching elements.

26.   difference between getwindowhandles and getwindowhandle?

getwindowhandle( ):

- is used to get the address of the current browser where the control is and return type is (string)

getwindowhandles( ):

- it use to get the address of all the open browser and its return type is set <strings>

27.   what are the assertions in selenium?

assertion in selenium is used to conduct a verification point.

28.   diffrerence between assert and verify?

Assert:

- when the Assert command fails the test is stopped immidiately.

verify:

- when the verify command fails, selenium IDE logs this failure and continues with the test execution.

29.   web driver is an interface or class?

web driver is an interface

30.   firefox driver is interface or class?from where is it inherited?

firefox driver is a class. it implements all the methods of web driver interface

31.   how do you launch firefox browser?

driver = new firefoxdriver( );

32.   how do you launch IE browser?

system .set property("webdriver . ie .driver",

"E : \SELENIUM_AUTOMATION\webdriver automation\drivers\IEdriverserver.exe");

driver = new internetexplorerdriver( );

the above will only work if all the protectd mode settings is set to same level.

33.   what version of IEare supported by selenium webdriver?

till date, selenium webdriver supports IE 6,7,8,9,10and11 with appropriate combinations of windows 7,vista or xp.

34.   how do you launch chrome browser?

system.set property

("webdriver.chrome.driver","E:\SELENIUM_AUTOMATION\webdr iver_automation\drivers\chromedriver.exe");

driver = new chromedriver.

35. difference between driver,get( )and driver.navigate( )methods?

driver.get( )

driver.get( ) method is generally used for open URL.

it will wait till the whole page gets loaded.

driver.navigate( )

driver. navigate ( ) method is generally used for navigate to URL, navigate back,navigateforward,refresh the page.

it will just navigate to the page but will not wait till the whole page gets loaded.

36. how to maximize a window?

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

37. commands used to invoke an application in webdriver?

get and navigate commands are used to invoke an application in web driver.

driver.get("http://newtours.demoaut.com");

driver .navigate( ).to ("https://www.google.co.in");

38. different get commands?

driver.get("http://newtours.demoaut.com");

system.out.println("the title of the page is:"+ driver . gettitle( ));

system.out.println("the URL of the page is : " + driver .getcurrentUrl(
)) ;

system.out.println ("the pagesource of the page is: " +
driver.getpagesource( ));

39.   different navigation commands?

driver.navigate().to ("http://newtours.demoaut.com");

driver .navigate ( ). back( );

driver.navigate( ).forward( );

driver.navigate ( ).refresh( );

40.   different ways to refresh page.Do not use .refresh( ) method?

we can refresh browser in many different ways. three of them are as below:

driver.get(driver.getcurrentUrl( ));

driver.findelement(By.name("userName")).sendkeys(keys.F5);

41.   how to assert?

stringexpectedtitle = driver.gettitle( );

string actual title = "welcome:mercury tours";

Assert.assertTrue(signon_link.is displayed( ));

system.out.println("signon_link displayed on the login page:signon_link.isdisplayed( ));

42.   how to input text into textbox?

webelement username=driver.findelement(By.name("username"));

username.sendkeys("selenium");

webelement password = driver.findelement(By.name("password"));

password.sendkeys("selenium");

43.   tell me different ways to type text in textbox in selenium test?

we can type text in textbox of web page using bellow given ways in selenium test.

using.sendkeys( ) method:

driver.findelement(by.name("username")).sendkeys("selenium");

usingjavascriptexecutor:

webelementsearchbox = driver.findelement(by.xpath("//input[@name='username']"));

javascriptexecutormyexecutor=((javascriptexecutor)driver);

myexecutor.executescript(arguments[0].value='selenium';",searchbox)
;

44.   how do you clear the contents of a text book in selenium?

driver.findelement(by.name("username")).sendkeys("selenium");

driver.findelement(by.name("username")).clear( );

45.   how do you clear the contents of a text book in selenium?

driver.findelement(by.name("username")).sendkeys("selenium");

driver.findelement(by.name("username")).clear( );

46.   how to click on element?

webelement loginBtn = driver.findelement(By.name("login"));

loginBtn.click( );

47.   usage of "submit" method / Alternate way to click on login button?

submit method is used to submit the forms in selenium webdriver

web element loginBtn = driver.findelement (By.name("login"));

loginBtn.submit( );

48.   Do you have faced any issue with "submit" method any time?

- Yes,I have faced issue like submit method was not working to submit the form.In this case,submit button of form was located outside the opening <form>and closing <%form>tags.in this case submit method will not work to submit the form.

49.   also if submit button is located inside opening <form> and closing</form> tags but that button's type tag is attribute isn't submit then submit method will not work. It (type tag's attribute) should be always submit.

50.   how to capture screen shot?

we can use selenium webdriver "Take screen shot" method to capture screenshot. Java file class will be used to store screenshot in your systems local drive.

File scrFile =

((Takesscreenshot)driver).getscreenshotAs(outputType.File);

FileUtils.copyFile(scrFile, new

File("E\SELENIUM_AUTOMATION\Webdriver_Automation\screen shots\Booked Details.png"));

51.   If "Assert.assertEquals( )"function fails automatically to take ss?

Eventfiringwebdriveredriver=new eventFiringwebdriver(driver);

File srcFile = edriver.getsscreenshotAs(outputtype.file);

FileUtils.copyfile(srcfile'new

File("E:\SELENIUM_AUTOMATION\Webdriver_Automation\scree nshots\Assertion.png"));

52.   what is the differnce b/w close( ) and quit( )?

driver.close( );//It will close the browser/page currently where the control /focus is.

driver.quit( );//It will close all the browsers opened by webdriver or shut down webdriver instance.

53.   what is the difference between get Attribute( ) and getText( )?

getAttribute( ) method is useful to read element's attribute value like id,name,type etc.

getText( ) method is useful to read text from element or alert.

54.   How do u get the attribute of the web element?

string GetAtvalue2 = driver. findElement (By.tagName("img")).getAttribute("src");

system.out.println("the attribute of web element is : "+GetAttvalue2);

you will get 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").

55.   how do you get the text of the web element?

stringGetText =

driver.findElement(By.xpath("//table/tbody/tr[1]/td/font/b")).get Text( );

system.out.println("The text displayed is :"+GetText);

56.   How to double click using javascript ..?

```
WebElementobjWebElement =

oBrowser.findElement(By.xpath("<xpath value>"));


JavascriptExecutorjs = (JavascriptExecutor) oBrowser;

js.executeScript("arguments[0].dblclick;", objWebElement);
```

OR


```
WebElementobjWebElement

=oBrowser.findElement(By.xpath("<xpath value>"));

JavascriptExecutorjs = (JavascriptExecutor) oBrowser;


js.executeScript("varevt = document.createEvent('MouseEvents');"

+ "evt.initMouseEvent('dblclick',true, true, window, 0, 0, 0, 0, 0,
false, false, false, false, 0,null);"

+ "arguments[0].dispatchEvent(evt);", objWebElement);
```