1. What are the locators available to identify elements using selenium?

Ans. WebDriver supports 8 types of locators.They are:

1. id

2. name

3. classname

4. linkText

5. PartialLinkText

6. tagname

7. xpath

8. cssSelector

==========================================================================

2. Mention what is the use of xpath?

Ans. Xpath is preferred when webelements doesn't consist proper attribute values to address.

-- Xpath means addressing webelement based on hierarchy of nodes/tagnames in a page.

-- Xpath - Addressing the webelement from the root/node

-- Xpath can be used using two types.

(i)Absolute xpath (Full xpath) and (ii) Relative xpath (Partial xpath)

-- Xpath can use the combination of both Relative xpath & Absolute xpath

===========================================================================

3. What is the difference between implicit and explicit wait?

Ans. Both Implicit wait and explicit wait are conditional based Synchronization methods.

-- Implicit Wait - Using this option we can pause execution specified amount of time(i.e. 30 secs) when any webelement is not able to identify in a page during runtime.

-- Explicit Wait - To pause execution at particular position based on presence of particular webelement in DOM(i.e. to wait when webelement code is not available in HTML page source code)

==========================================================================

4. Is the below statement is true or false. Explain why?

WebDriver driver= new WebDriver();

Ans. False.

-- We cannot write our code like this because we cannot create Object of an Interface. WebDriver is an interface.

=========================================================================

5. write a code to switch to a frame in a window, after it switches to a frame

enter a text "MadhukarQAIT" into text field and click save button available in

frame and switch back to original window

Ans.// initialize browser

System.setProperty("webdriver.gecko.driver", "./Drivers\\geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("http://jqueryui.com/droppable/");

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

driver.switchTo().frame(0);

WebElement source=driver.findElement(By.id("draggable"));

WebElement target=driver.findElement(By.id("droppable"));

Actions a= new Actions(driver);

a.dragAndDrop(source, target).build().perform();

a.sendKeys("MadhukarQAIT");

a.click();

driver.switchTo().defaultContent();

========================================================================

6. Write a syntax to check if any element is visible on a web page?

Ans. Syntax: webelement.isDisplayed();

=========================================================================

7. How to print total number of links available in a webpage? write script

Ans. List <WebElement> links= driver.findElements(By.tagName("a"));

// To initialize the browser

System.setProperty("webdriver.chrome.driver", ".\\Drivers\\chromedriver.exe");

WebDriver driver=new ChromeDriver();

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

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

// To get total number of links

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

System.out.println("number of links are: "+links.size());

for (WebElement link : links)

System.out.println(link.getText());

===========================================================================

8. what would be the below method returns?

public static method(){

WebDriver driver= new FirefoxDriver();

driver.get("http://google.com");

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

String str1=localAlert.getText();

return str1;

}

Ans. alert

=========================================================================

9. \*What are the annotations used in TestNg?

Ans. @Test, @BeforeTest, @AfterTest, @BeforeMethod, @AfterMethod, @BeforeSuite, @AfterSuite, @BeforeGroups, @AfterGroups, @BeforeClass, @AfterClass, @DataProvider, @Factory, @Listners, @Parameters,

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

========================================================================

10. Write a java program to count number of characters in a given string?-MadhukarQAIT

Ans. public class CountCharacter {

public static void main(String[] args) {

String str= "MadhukarQAIT";

int count=0;

System.out.println("Number of characters: "+str);

//Counts each character except space

for(int i=0; i<=str.length();i++) {

if (str.charAt(i)!=' ')

count++;

//Displays the total number of characters present in the given string

System.out.println("Total number of characters in a string: " + count);

}

}

}

====================================================================================

11. \*what is the difference between assert and verify commands?

Ans. Assert: Assert command checks if the given condition is true or false. If the condition is true, the program control will execute the next phase of testing, and if the condition is false, execution will stop and nothing will be executed.

Verify: Verify command also checks if the given condition is true or false. It doesn't halts program execution i.e. any failure during verification would not stop the execution and all the test phases would be executed.

====================================================================================

12. What are the different types of waits available in WebDriver? Explain briefly

Ans. We have 3 different types of Waits:

1. Implicit Wait

2. Explicit Wait

3. Fluent Wait

(a) Implicit Wait:

-------------

Using this option we can pause execution specified amount of time (i.e 30 sec)

When any webelement is not able to identify in a page during runtime

Syntax: driver.manage().timeouts().implicitlyWait(time, TimeUnit parameter);

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

(b) Explicit Wait:

-------------

To pause execution at particular position based on presence of particular web element in DOM (i.e. to wait when webelement code is not available in HTML page

source code)

Syntax: Wait<WebDriver>obj=new WebDriverWait(driver,30);

obj.until(ExpectedConditions.presenceOfElementLocated(By.LocatorName("value"));

Ex: Wait<WebDriver> wt= new WebDriverWait(driver, 30);

wt.until(ExpectedConditions.presenceOfElementLocated(By.linkText("BRAHMADEVI-NLR")));

(c) Fluent Wait:

-----------

Using Fluentwait option we can set polling time to check webelement availibility

Syntax: Wait wait = new FluentWait(WebDriver reference)

.withTimeout(timeout, SECONDS)

.pollingEvery(timeout, SECONDS)

.ignoring(Exception.class);

Ex:

Wait<WebDriver> wait = new FluentWait<WebDriver>(driver)

.withTimeout(30, SECONDS)

.pollingEvery(5, SECONDS)

.ignoring(NoSuchElementException.class);

Note: \*\* Where as Fluentwait is not preferred present versions of WebDriver

================================================================================================

13. How can you find if an element is displayed on the screen? List method used

Ans. List <WebElement> elements=driver.findElements(By.id("idOfElement"));

// driver.findElement(By.id("idOfElement")).isDisplayed();

================================================================================================

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

Ans. driver. quit() is used to exit the browser, end the session. It will close all the multiple windows in that session.

But driver. close(), only the window that has focus is closed.It will close only that one particular window.

===============================================================================================

15. What is the difference between driver.get() and driver.navigate().to() commands

Ans. driver.get() is used to navigate particular URL(website) and wait till page load.

driver. navigate() is used to navigate to particular URL and does not wait to page load.

================================================================================================

16. How do you launch IE/Chrome browser? write code

Ans. //System.setProperty("webdriver.chrome.driver", "path of executable file");

System.setProperty("webdriver.chrome.driver", ".\\Drivers\\chromedriver.exe");

WebDriver driver=new ChromeDriver();

// To launch IE browser

//System.setProperty("webdriver.ie.driver", "path of executable file");

System.setProperty("webdriver.ie.driver", ".\\Drivers\\IEDriverServer.exe");

WebDriver driver=new InternetExplorerDriver();

================================================================================================

17. How to capture screenshot in WD? write code

Ans. File fo=((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

public class CaptureScreenshotEx {

public static void main(String[] args) throws IOException {

//to Initialize browser

System.setProperty("webdriver.gecko.driver", "./Drivers\\geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("http://facebook.com");

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

//to capture screenshot of page and to return into file format

File fo=((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

//to save in specified location

// FileHandler.copy(fo, new File("D:\\Facebook"+df.format(dt)+".png"));

//to save file in "Defects" folder at Project directory

FileHandler.copy(fo, new File(".//Defects//Facebook"+df.format(dt)+".png"));

================================================================================================================

18. How to select option in Dropdown? write code

A. Syntax: { to configure Select class to dropdown}

Select obj=new Select(driver.findElement(By.locatorname(locator value));

Following are the methods provided by Select Class:

(i) selectByVisibleText()

Syntax: obj.selectByVisibleText(value);

(ii) selectByValue()

Syntax: obj.selectByValue(value);

(iii) selectByIndex()

Syntax: obj.selectByIndex(number);

Script: Select listMonth=new Select(driver.findElement(By.id("month")));

Code: //To initialize browser

System.setProperty("webdriver.chrome.driver", "./Drivers//chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("http://facebook.com");

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

//to read value which is selected in "Month" dropdown

Select listMonth=new Select(driver.findElement(By.id("month")));

String monthName=listMonth.getFirstSelectedOption().getText();

System.out.println(monthName);

if(monthName.equalsIgnoreCase("Mar")) {

System.out.println("Expected month exist");

}

else {

System.out.println("WD selected required month");

listMonth.selectByVisibleText("Mar");

}

}

}

======================================================================================================================================================

19. Does Selenium WebDriver support Record and Playback facility?

A. No. This feature is provided only by Selenium IDE component.

========================================================================================================================================================

20. How to navigate in Browser? write code

A. Using navigate().to(), navigate().back(),navigate().forward()(This feature is not available in Chrome),navigate().refresh()

=======================================================================================================================================================

21. How to get window handles of all the current windows and switch?write the code

A. To work on multiple windows we need to switch between windows by using window handles

Procedure:

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Step 1: First we need to get all the opened window handles using

"getWindowHandles" command

Syntax:

------

Set <String> pageHandles= driver.getWindowHandles();

It will return handles of all opened windows into "Set" class

Step 2:

------

Use Iterator class to read each window handle from "Set" class

Syntax:

------

Iterator <String> winHandles= pageHandles.iterator();

Step-3:

------

To read each window handle value into variable from Iterator class we can use next() method

Syntax:

------

String win1= winHandles.next();

String win2= winHandles.next();

Step 4:

------

To work on specified window we can use following command:

driver.switchTo().window(window handle);

Script Code:

-----------

System.setProperty("webdriver.chrome.driver", ".\\Drivers\\chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("http://gmail.com");

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

//to read page title

String pgTitle1=driver.getTitle();

System.out.println(pgTitle1);

//to click on "Help"

driver.findElement(By.linkText("Help")).click();

Thread.sleep(4000);

//to get all the opened window handles

Set<String> pgHandles= driver.getWindowHandles();

//to read values from Set class

Iterator<String> winHandles=pgHandles.iterator();

String w1=winHandles.next();

String w2=winHandles.next();

//to focus on 2nd window

driver.switchTo().window(w2);

String pgTitle2=driver.getTitle();

System.out.println(pgTitle2);

}

}

========================================================================================================================================================

22. How to handle popups to click "Yes" or "Agree" button? write the code

A. driver.switchTo().alert().accept();

// To Handle popups to click "No" or "Disagree" button

driver.switchTo().alert().dismiss();

========================================================================================================================================================

23. How to perform Drag and Drop? write the code

A. driver.switchTo().frame();

Need to use Action Class

a.dragAndDrop(source,target).build().perform();

Script Code:

-----------

System.setProperty("webdriver.gecko.driver", "./Drivers\\geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("http://jqueryui.com/droppable/");

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

// Need to switch to frame

driver.switchTo().frame(0);

// To locate/identify total no of frames in the webpage

System.out.println(driver.findElements(By.tagName("iframe")).size());

// Need to use Action Class to perform DragAndDrop option

Actions a=new Actions(driver);

WebElement source=driver.findElement(By.id("draggable"));

WebElement target=driver.findElement(By.id("droppable"));

a.dragAndDrop(source, target).build().perform();

}

}

=========================================================================================================================================================

24. There is id, name, xpath, cssSelector locators, which one should be preferred?

A. We would firstly prefer id, if id is dynamic we will go to name, if we don't find either of these then we would prefer xpath to find the location of the webelement.

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25. How do I clear content of a text box in selenium? write the code

A. Syntax: obj.clear();

Ex: driver.clear();

Script:

//To initialize browser

System.setProperty("webdriver.chrome.driver", "./Drivers//chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("https://login.salesforce.com");

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

//create reference object for "Username" edit box

WebElement txtUsername=driver.findElement(By.id("username"));

//to focus on "Username" editbox

txtUsername.click();

//to clear the data

txtUsername.clear();

//to enter "Madhukar"

txtUsername.sendKeys("Madhukar");

//to Enter "QAIT"

txtUsername.sendKeys("QAIT");

//to read existng value from "Username" editbox

String uid=txtUsername.getAttribute("value");

//to compare the value

if(uid.equals("QAIT")) {

System.out.println("Expected value existing");

}

else {

System.out.println("Existing value is: "+uid);

}

===========================================================================================================================================================

26. How to count number of rows in a Table using selenium? write the code

A. driver.findElements(by.tagname("tr")); rows.size();

===========================================================================================================================================================

27. How to capature page title using selenium? write the code

A. driver.getTitle(); // To get Page Title

// To capture page title

File src= ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

FileUtils.copyFile(src,new File("D://screenshot.png"));

Ex: //To initialize browser

System.setProperty("webdriver.chrome.driver", "./Drivers//chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("https://facebook.com");

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

driver.getTitle();

File src= ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

FileUtils.copyFile(src,new File("D://screenshot.png"));

}

}

===========================================================================================================================================================

28. How to maximize window? write the code

A. driver.manage().window().maximize()

Code:

=====

System.setProperty("webdriver.chrome.driver", "./Drivers//chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("https://login.salesforce.com");

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

===========================================================================================================================================================

29. How to double click on WebElement? write the code

A. Syntax: obj.moveToElement(element).doubleClick().build().perform();

Ex: driver.moveToElement(target).doubleClick().build().perform();

===========================================================================================================================================================

30. How to get element attribute? write the code

A. Using Browser Interaction command getAttribute(attribute name)

It is used to read attribute value of that element.

Syntax: obj.getAttribute(attribute name)

Ex: driver.getAttribute("name");

Script:

//To initialize browser

System.setProperty("webdriver.chrome.driver", "./Drivers//chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("https://facebook.com");

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

//create reference object for "Signup" button

WebElement btnSignup=driver.findElement(By.name("websubmit"));

//to read visibletext

String btnText=btnSignup.getText();

System.out.println("Object visible text is: "+btnText);

//to read name attribute value

String btnName= btnSignup.getAttribute("name");

System.out.println("Object name attribute value is: "+btnName);

//to click on Button

if(btnSignup.isEnabled()) {

System.out.println("Object is Enabled");

btnSignup.click();

}

else {

System.out.println("Object is disabled");

}

===========================================================================================================================================

31. What is JavascriptExecutor in Selenium WebDriver?

A. Javascript Executor is an Interface class which is provided in WebDriver library like WebDriver,Actions,Select,Takesscreenshot.....etc

Using this class we can able to click on webelement,enter data, highlight a specific webelement,scrollbar operations......etc

In general Javascript Executor is preferred where WebDriver unable to identify Webelements using locator values in a page

To use Javascript Executor we need to do type-casting for driver object.

Syntax:

------

{Type casting to driver object}

Javascript Executor Obj = ((Javascript Executor)driver);

Javascript Executor providing "executeScript" method to perform operations

Syntax:

-------

Obj.executeScript(command,args);

Ex: //to Initialize browser

System.setProperty("webdriver.gecko.driver", "D:\\SelResource\\geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

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

Thread.sleep(3000);

JavascriptExecutor js=((JavascriptExecutor)driver);

//scroll down

js.executeScript("window.scrollBy(0,2500)");

Thread.sleep(3000);

//scroll up

js.executeScript("window.scrollBy(0,-1000)");

===============================================================================================================================================================