**1.What is Xpath ?**

[Xpath](http://www.softwaretestinghelp.com/using-selenium-xpath-and-other-locators-selenium-tutorial-5/) is used to locate a web element based on its XML path. is used to store, organize and transport arbitrary data.The fundamental behind locating elements using Xpath is the traversing between various elements across the entire page and thus enabling a user to find an element with the reference of another element.

**2. Difference between Relative and absolute 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.

**3. Which locator is fast and why ?**

Finding elements by ID is usually going to be the fastest option, because at its root, it eventually calls down to document.getElementById(), which is optimized by many browsers.

Finding elements by XPath is useful for finding elements using very complex selectors, and is the most flexible selection strategy, but it has the potential to be very slow, particularly in IE.

If you have a need to find an element using a complex selector, I usually recommend using CSS Selectors,

**4. Difference between implicit and explicit wait ?**

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

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

**5. What are desired capabilities?**

The desired capability is a series of key/value pairs that stores the browser properties like browser name, browser version, the path of the browser driver in the system, etc. to determine the behavior of the browser at run time.

For Selenium,

* It can be used to configure the driver instance of Selenium WebDriver.
* When you want to run the test cases on a different browser with different operating systems and versions.

**6. Difference between close and Quit?**

**close()**: WebDriver’s close() method closes the web browser window that the user is currently working on or we can also say the window that is being currently accessed by the WebDriver. The command neither requires any parameter nor does is return any value.

**quit()**: Unlike close() method, quit() method closes down all the windows that the program has opened. Same as close() method, the command neither requires any parameter nor does is return any value.

**6.  What is Remote Webdriver?**

[WebDriver](http://www.gcreddy.com/2014/07/selenium-webdriver.html) is actually interface and implementations are firefoxdriver, ie driver, chromedriver, htmlunitdriver, remoteWebDriver

RemoteWebDriver requires the selenium-server-standalone to be running (the others do not). This could be running on the same machine or a "remote" one.

If you want to use [Grid](https://www.google.co.in/search?oq=Selenium-Grid+gc&q=Selenium-Grid+gc+reddy&rlz=1C1RLNS_enIN744IN744) (which is run via selenium-server-standalone) then you \*must\* use RemoteWebDriver.

**7. Where we use set and where we use list in selenium webdriver ?**

**8. explain xpath siblings**

XPath siblings are used to locate complicated webelements.

siblings ===> following-sibling / preceding-sibling

(following-sibling --- younger, preceding-sibling ------elder )

Usage of descendant ---- getting the approx child

//table[@class='textFieldsTable']/descendant::input[@name='username'] (--- top to down approach)

Usageof ancestor ---- grandparent

//input[@name='username']/ancestor::table[@class='textFieldsTable'] (down to top approach)

**9. Which version of selenium did you use?**

2.8

Latest :- 3.6

**10.Why Factory design pattern is used?**

**11.What is the datadriven testing?**

Data-driven testing is creation of test scripts where test data and/or output values are read from data files instead of using the same hard-coded values each time the test runs. This way, testers can test how the application handles various inputs effectively.

**12.What are the different assertions you used?**

Assert Equals, Assert Not Equals, Assert True, Assert False,Assert Null

**13.How we are using dataprovider**

When you need to pass complex parameters or parameters that need to be created from Java (complex objects, objects read from a property file or a database, etc…), in such cases parameters can be passed using Dataproviders. A Data Provider is a method annotated with @DataProvider. A Data Provider returns an array of objects.

Let us check out the same Sign In examples using Data Providers with Excel data sheet.

How to do it…

Here we will follow a simple step by step process to Implement Excel with TestNg Data Provider.

Step 1: Create a test case of Login Application with TestNG Data Provider.

Step 2:  Create a Test Data sheet.

Step 3: Create functions to Open & Read data from Excel

Step 4: Create a TestNg test case for accepting data from Excel using Data Provider.

Step 5: Run the test against the Test Case name in the Test Data file.

**14.What are the different classes we use when we are taking the data from .xlsx file?**

File, FileInputStream, Workbook,Sheet

**15.Which jar file you used to read excel?**

Apache POI jar

**16. How you will get the Webdriver? If it is chrome driver then how you will get the driver?**

Download Selenium ChromeDriver

public class ChromeTest {

    @Test

    public void LaunchChrome\_Method1() {

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

        ChromeOptions options = new ChromeOptions();

        options.addArguments("disable-infobars");

        WebDriver driver = new ChromeDriver(options);

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

    }

}

**17. What we are using to to find the location of webelements? Difference between Css and Xpath? Which is better Css or Xpath?**

Css is faster than xpath. IF YOU WANT to TRAVERSE back and front than use xpath..

**18.How do you automate the dialogue box or prompts?**

* *accept() To accept the alert*
* *dismiss() To dismiss the alert*
* *getText() To get the text of the alert*
* *sendKeys() To write some text to the alert*

**19.How will you do the actions without using driver.findelement?**

**20.Write code in selenium for finding number of links**

public class FindAllLinks {

    public static void main(String[] args) {

        WebDriver driver = new FirefoxDriver();

        driver.get("http://toolsqa.wpengine.com/");

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

        System.out.println(links.size());

        for (int i = 1; i<=links.size(); i=i+1)

        {

            System.out.println(links.get(i).getText());

        }

    }

}

**Explanation to be done**

1) Navigate to the interested webpage for e.g. www.toolsqa.wpengine.com.

don't say tools qa just say any url

2) Create a list of type WebElement to store all the Link elements in to it.

3) Collect all the links from the webpage. All the links are associated with the Tag ‘a‘.

**4) Now iterate through every link and print the Link Text on the console screen.**

 Define Firefox Browser and open the Firefox Browser

·         Open the URL (Website)

·         Identify the number of Links on webpage and assign into Webelement List

·         Count the total Link list on Web Page

·         Print the total count of links on webpage

·         Identify all the elements on web page

·         Count the total all element on web page

·         Print the total count of all element on webpage

·         Print all the Tag Name and Text Name on webpage

**21.How to identify internal and external links**

**@Test**

public void linkCount(){

 arrayList = new ArrayList<WebElement>();

 arrayList = driver.findElements(By.tagName("a"));

 arrayList.addAll(driver.findElements(By.tagName("img")));

 System.out.println("Total Count of Links : " + arrayList.size());

 for(WebElement element : arrayList){

  System.out.println("URL : " + element.getAttribute("href"));

  if(element.getAttribute("href").contains("whiteboxqa.com")){

    internalCount++;

  }

  else if(element.getAttribute("href")==null){

    nullLinksCount++;

  }

  else if(element.getAttribute("href").contains("https://")){

    externalCount++;

  }

  else

    System.out.println("nothing to be done..");

 }

 System.out.println("External link Count : " + externalCount

      + "Internal Link Count : " + internalCount

      + "null Link Count : " + nullLinksCount);

}”

**22. Write the code for Reading and Writing to Excel through Selenium ?**

FileInputStream fis = new FileInputStream(“path of excel file”);

Workbook wb = WorkbookFactory.create(fis);

Sheet s = wb.getSheet("sheetName");

String value = s.getRow(rowNum).getCell(cellNum).getStringCellValue(); // read data

s.getRow(rowNum).getCell(cellNum).setCellValue("value to be set"); //write data

FileOutputStream fos = new FileOutputStream(“path of file”);

wb.write(fos); //save file

**23.  How to find all Total number of links in a WebPage ?**

import java.util.List;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Count\_Total\_Weblink\_and\_AllElement\_on\_Webpage {

      public static void main(String[] args) {

             //Define the Webdriver for Browser i.e. Firefox

             WebDriver driver = new FirefoxDriver();

             //Open the URL (Website)

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

       //Identify the number of Link on webpage and assign into Webelement List

       List<WebElement> allLinkElements = driver.findElements(By.xpath("//a"));

       // Count the total Link list on Web Page

       int linkListCount = allLinkElements.size();

       //Print the total count of links on webpage

       System.out.println("Total Number of link count on webpage = "  + linkListCount);

      //Identify all the elements on web page

      List<WebElement> allElements = driver.findElements(By.xpath("//\*"));

      //Count the total all element on web page

      linkListCount = allElements.size();

      //Print the total count of all element on webpage

      System.out.println("Total Number of All Element on webpage = "  + linkListCount);

      //Print all the Tag Name and Text Name on webpage

      int i = 0;

       for (WebElement Element : allElements) {

           i = i +1;

           System.out.println(Element.getTagName());

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

       }

       //Close the Broswer

      driver.close();

      // Quit the selenium

      driver.quit();

      }

}

---------for short-----

public class FindAllLinks {

public static void main(String[] args) {

WebDriver driver = new FirefoxDriver();

driver.get("http://toolsqa.wpengine.com/");

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

System.out.println(links.size());

for (int i = 1; i<=links.size(); i=i+1)

{

System.out.println(links.get(i).getText());

}

}

}

-----------------------Gomathy -wipro/visa---10/27-----------------------------

Q: Type testing supported in selenium.

Q: Current version of selenium

-----------------------------------sayantika- skype-Hilton---------------------------

how to initialize browser? and selenium functions?..can you explain..

what is command you use to run selenium grid?

how to use grid in your project