**What are limitations in selenium webdriver**

ex: It does not support and non web-based applications, it only supports web based applications.

Its an open source tool so in case of any technical issues you need to rely on the selenium community forums to get your issue resolved.

You need to know at least one of the supported language very well in order to automate your application successfully.

No inbuilt reporting capability so you need plugins like JUnit and TestNG for test reports.

Lot of challenges with IE browser.

**Installing/configure selenium**

First we should download selenium jar files.

After jdk setup we should install eclipse

Create a project and import the selenium jar files in the project

what are different ways of locating elements in selenium

ex : By x.path,by.id,by.classname,by.css selector,by.linktext,by.partiallinktext,by Name

which is fastest way to identify elements in web page?

ex: by using css selector or id

**what is absolute path and relative path in xpath**

ex: relative path

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

driver.findElement(By.xpath(".//\*[@id='u\_0\_n']")).click();

//driver.quit();

}

}

Relative path

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

driver.findElement(By.xpath /html/body/div[5]/div[2]/div/div[2]/div[2]/h2[1]

")).click();

//driver.quit();

}

}

**Different types of waits or synchronization in selenium webdriver**

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver(

driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS);

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

driver.findElement(By.*xpath*(".//\*[@id='u\_0\_n']")).click();

}}

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver= new FirefoxDriver();

WebDriverWait wait = new WebDriverWait(driver, 10); //Explicit wait for 10 seconds

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

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

wait.until(ExpectedConditions.visibilityOf(username));

}}

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

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver= new FirefoxDriver();

WebDriverWait wait = new WebDriverWait(driver, 10); //Explicit wait for 10 seconds

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

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

wait.until(ExpectedConditions.visibilityOf(username));

}}

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver= new FirefoxDriver();

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

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

.withTimeout(30, TimeUnit.SECONDS)  // wait maximum 30 seconds

.pollingEvery(5, TimeUnit.SECONDS)  // check after every 5 seconds

.ignoring(NoSuchElementException.class);  // ignore NoSuchElementException

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

public WebElement apply(WebDriver  driver) {

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

}

});

**How to save screen shots using selenium webdriver**

package basics;

import java.io.File;

import java.io.IOException;

import org.apache.commons.io.FileUtils;

import org.openqa.selenium.OutputType;

import org.openqa.selenium.TakesScreenshot;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import com.gargoylesoftware.htmlunit.StorageHolder.Type;

public class EndTask

{

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

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("http://www.espncricinfo.com/ci/engine/match/415281.html");

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

FileUtils.copyFile(scr, new File("z://screenshot.png"));

}

}

**how to handle multiple windows in selenium webdriver**

package basics;

import java.util.Iterator;

import java.util.Set;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

//import org.openqa.selenium.remote.server.handler.GetWindowPosition;

public class MultiHandlingwindow

{

public static void main(String[] args) throws InterruptedException

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("https://accounts.google.com/SignUp?service=mail&continue=https://mail.google.com/mail/?pc=topnav-about-en");

driver.findElement(By.xpath(".//\*[@id='wrapper']/div[2]/div/div[1]/p/a")).click();

System.out.println(driver.getTitle());

int size=driver.getWindowHandles().size();

for(int i=0;i<=1;i++)

{

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

Iterator<String>it=id.iterator();

String parentid=it.next();

String childid=it.next();

if(i>=1)

{

String child2id=it.next();

driver.switchTo().window(child2id);

System.out.println(driver.getTitle());

}

if(i==0)

{

if(parentid!=null)

{

driver.switchTo().window(parentid);

System.out.println(driver.getTitle());

}

if(childid!=null)

{

driver.switchTo().window(childid);

System.out.println(driver.getTitle());

Thread.sleep(5000);

driver.findElement(By.xpath(".//\*[@id='promotion-yt\_promo']/div[2]/p/a")).click();

Thread.sleep(5000);

}

}

}

}

}

**How to lanuch webpage using chrome driver**

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

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

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

}}

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

what is desired capabilities in selenium webdriver

import java.net.MalformedURLException;  
import java.net.URL;

import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.remote.DesiredCapabilities;  
import org.openqa.selenium.remote.RemoteWebDriver;  
import org.testng.annotations.BeforeTest;  
import org.testng.annotations.Test;

public class Saucelab {

@Test  
  
public void setup() throws MalformedURLException  
{  
new DesiredCapabilities();  
DesiredCapabilities dc=DesiredCapabilities.firefox();  
dc.setCapability("version", "5");  
dc.setCapability("platform","XP");  
  
WebDriver driver=new RemoteWebDriver(  
new URL("http://vamsi:343434369-e63f-46ee-b0c0@ondemand.saucelabs.con:80/wd/hub"),  
dc);  
driver.get("http://google.com");  
System.out.println(driver.getTitle());  
}

}

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

how to set language while opening website

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

FirefoxProfile profile = new FirefoxProfile();  
  
profile.setPreference(“intl.accept\_languages”,”fr”);  
driver = new FirefoxDriver(profile);  
driver.get(“http://www.gmail.com”);

}}

**How to handle windows based popups (upload and dropdown)**

Ex: package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Alerts {

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("http://www.tizag.com/javascriptT/javascriptalert.php");

driver.findElement(By.xpath("html/body/table[3]/tbody/tr[1]/td[2]/table/tbody/tr/td/div[4]/form/input")).click();

System.out.println(driver.switchTo().alert().getText());

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

}

}

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.ExpectedCondition;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.WebDriverWait;

public class Autodropdowns {

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

driver.get("https://fantasycricket.dream11.com/in/");

WebDriverWait wd=new WebDriverWait(driver, 5);

driver.findElement(By.xpath(".//\*[@id='m\_rtxtEmail1']")).sendKeys("asregh");

wd.until(ExpectedConditions.visibilityOfElementLocated(By.xpath(".//\*[@id='m\_frmRegister']/div[1]/ul")));

driver.findElement(By.xpath(".//\*[@id='m\_frmRegister']/div[1]/ul/li[6]/p")).click();

}

}

**write code to verify any application login page is working or not**

(u should write code to use textbox, button click events)

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.By.ById;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator2

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

driver.findElement(By.id("email")).sendKeys("vishwanath.sw24@gmail.com");

driver.findElement(By.name("pass")).sendKeys("blaa");

driver.findElement(By.id("u\_0\_n")).click();

}

}

**how to select items from dropdown/select box**

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.Select;

public class DropDownDemo

{

public static void main(String[] args) throws InterruptedException

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

Select dd=new Select(driver.findElement(By.xpath(".//\*[@id='month']")));

Thread.sleep(500);

dd.selectByIndex(2);

Thread.sleep(500);

dd.selectByVisibleText("May");

}

}

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

how to know if checkbox is checked or not in webpage

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class CheckBoxDemo {

public static void main(String[] args) throws InterruptedException

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

driver.findElement(By.xpath(".//\*[@id='rememberUn']")).click();

Thread.sleep(500);

driver.findElement(By.xpath(".//\*[@id='rememberUn']")).click();

System.out.println(driver.findElement(By.xpath(".//\*[@id='rememberUn']")).isSelected());

}

}

**Write code to find out if all links are working or not**

String allLinks[]=selenium.getAllLinks();  
for(int i=0;i<allLinks.length;i++){  
  
  selenium.click(allLinks[i]);  
  Thread.sleep(3000);  
     
  }  
---------------------------------

importjava.util.ArrayList;

importjava.util.List;

import [org.openqa.selenium.By](http://org.openqa.selenium.by/" \t "_blank);

importorg.openqa.selenium.WebDriver;

importorg.openqa.selenium.WebElement;

importorg.openqa.selenium.firefox.FirefoxDriver;

public class FindBrokenLinks {

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

  WebDriver driver = new FirefoxDriver();

  driver.get("<https://www.xyz.com/>");

  Thread.sleep(5000L);

  int size = driver.findElements(By.tagName("a")).size();

  System.out.println(size);

  List<String>Linkarray = new ArrayList<String>();

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

      for (WebElement link : Linklist) {

       String links = link.getText();

       Linkarray.add(links );

      }

      for (String linkToTest : Linkarray){

       driver.findElement(By.linkText(linkToTest)).click();

       Thread.sleep(15000L);

    if(driver.getTitle().contains("Problem")) {

     System.out.println("Fail");

    }

    else

    {

     System.out.println("pass");

    }

    driver.navigate().back();

    Thread.sleep(5000L);

   }

  driver.close();

}

**write code on how to use javascriptexecutor?**

importjava.util.concurrent.TimeUnit;

importorg.openqa.selenium.JavascriptExecutor;

importorg.openqa.selenium.WebDriver;

importorg.openqa.selenium.firefox.FirefoxDriver;

publicclassJavaScriptExecuter {

publicstaticvoid main(String[] args) {

WebDriver driver = newFirefoxDriver();

//Launching the browser application

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

//Adding wait

driver.manage().timeouts().implicitlyWait(20, TimeUnit.SECONDS);

//Maximize window

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

//Creating the Javascriptexecutor interface object by Type casting

JavascriptExecutorjs = (JavascriptExecutor)driver;

//Fetching the Domain Name

String sDomain = js.executeScript("return document.domain;").toString();

System.out.println("Domain = "+sDomain);

//Fetching the URL

String sURL = js.executeScript("return document.URL;").toString();

System.out.println("URL = "+sURL);

//Fetching the Title

String sTitle = js.executeScript("return document.title;").toString();

System.out.println("Title = "+sTitle);

//Vertical scroll - down by 200 pixels

js.executeScript("window.scrollBy(0,200)");

System.out.println("Successfully did the vertical scroll by 200px");

}

}

**Difference between assert and verify?**

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import junit.framework.Assert;

public class AssertsDemo {

public static void main(String[] args)

{

// TODO Auto-generated method stub

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

System.out.println("before clicking");

Assert.assertTrue(driver.findElement(By.xpath(".//\*[@id='return\_date\_sec']")).isDisplayed());

driver.findElement(By.xpath(".//\*[@id='multi\_city\_button']/span")).click();

System.out.println("after clicking");

Assert.assertTrue(driver.findElement(By.xpath(".//\*[@id='return\_date\_sec']")).isDisplayed());

}

}

verify

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import junit.framework.Assert;

public class VerifyDemo {

public static void main(String[] args)

{

// TODO Auto-generated method stub

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

if(driver.getPageSource().contains("Text –Need Hotels"))

{

System.out.println("Text is Present");

}

else

{

System.out.println("Text is not Present");

}

}}

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

**Difference between driver.close and driver.quit methods?**

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

driver.findElement(By.xpath(".//\*[@id='wrapper']/div[2]/div/div[1]/p/a")).click();

driver.quit();

}

}

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

driver.findElement(By.xpath(".//\*[@id='wrapper']/div[2]/div/div[1]/p/a")).click();

driver.close();

}

}

**common exceptions in selenium?**

public void findSearchTextBox()   
{   
 By incorrectSearchTextBoxLocator = By.xpath("//input[@id='globalQuery1']");  
 driver.get("http://www.vpl.ca");   
 try  
 {   
  WebElement searchField = driver.findElement(incorrectSearchTextBoxLocator);   
 }   
 catch(NoSuchElementException ex)   
 {   
   fail("search text box not found");   
 }   
}

[@Test](https://huddle.eurostarsoftwaretesting.com/members/test/)  
public void findSearchTextBox() throws IOException, ElementNotFoundException   
{   
 By incorrectSearchTextBoxLocator = By.xpath("//input[@id='globalQuery1']");  
  
 driver.get("http://www.vpl.ca");   
 try  
 {   
   WebElement searchField = driver.findElement(incorrectSearchTextBoxLocator);   
 }   
 catch(NoSuchElementException exception)   
 {   
   openLog();   
   try   
   {   
     addToLog(exception.getMessage());   
   }   
   catch (IOException ex)   
   {   
     throw new ElementNotFoundException("search text box not found", exception);   
   }   
 }   
 finally   
 {   
   closeLog();   
 }   
}

**package** basics;

**import** org.openqa.selenium.By;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.WebElement;

**import** org.openqa.selenium.firefox.FirefoxDriver;

**import** org.openqa.selenium.support.ui.ExpectedConditions;

**import** org.openqa.selenium.support.ui.WebDriverWait;

**public** **class** Pizza {

**public** **static** **void** main(String[] args) **throws** InterruptedException

{

System.*setProperty*("webdriver.gecko.driver", "c://geckodriver.exe");

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

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

//WebDriverWait wd=new WebDriverWait(driver, 5);

Thread.*sleep*(5000);

driver.findElement(By.*xpath*(".//\*[@id='find\_desc']")).sendKeys("Restaurants");

Thread.*sleep*(5000);

//wd.until(ExpectedConditions.visibilityOfElementLocated(By.xpath(".//\*[@id='header\_find\_form']/div/div[1]/div/div/ul/li[1]/div/strong")));

driver.findElement(By.*xpath*(".//\*[@id='header\_find\_form']/div/div[1]/div/div/ul/li[1]/div/strong")).click();

Thread.*sleep*(5000);

WebElement element = driver.findElement(By.*id*("find\_desc"));

Thread.*sleep*(5000);

String previousText = element.getAttribute("value");

Thread.*sleep*(5000);

element.clear();

element.sendKeys("pizza " + previousText);

Thread.*sleep*(5000);

driver.findElement(By.*xpath*(".//\*[@id='header-search-submit']")).click();

Thread.*sleep*(5000);

System.***out***.println(driver.findElements(By.*xpath*(".//\*[@id='wrap']/div[4]/div[1]/div/div[2]/div/div[1]/h1")).size());

}

}

**How to handle Ajax calls in selenium?**

public void waitForAjaxControls(int timeoutInSeconds) {

System.out

.println("Querying active AJAX controls by calling jquery.active");

try {

if (browser instanceof JavascriptExecutor) {

JavascriptExecutor jsDriver = (JavascriptExecutor) browser;

for (int i = 0; i < timeoutInSeconds; i++) {

Object numberOfAjaxConnections = jsDriver

.executeScript("return jQuery.active");

// return should be a number

if (numberOfAjaxConnections instanceof Long) {

Long n = (Long) numberOfAjaxConnections;

System.out

.println("Number of active jquery AJAX controls: "

+ n);

if (n.longValue() == 0L)

break;

}

Thread.sleep(1000);

}

} else {

System.out.println("Web driver: " + browser

+ " can't run javascript.");

}

} catch (InterruptedException e) {

System.out.println(e);

}

}

**How to assign the value to textbox other than sendkeys method?**

package basics;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

public class Locator1

{

public static void main(String[] args)

{

System.setProperty("webdriver.gecko.driver", "c://geckodriver.exe");

WebDriver driver=new FirefoxDriver();

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

WebElement cssValue= driver.findElement(By.xpath(".//\*[@id='s']"));

JavascriptExecutor jse = (JavascriptExecutor) driver;

jse.executeScript("document.getElementById('s').value='Virender Testing

sending'");

**Selenium grid, how to execute scripts on multiple browser**

public enum Environments {

FF\_18\_WIN7("firefox", "18", Platform.WINDOWS),

CHR\_24\_WIN7("chrome", "24", Platform.WINDOWS),

IE\_9\_WIN7("internet explorer", "9", Platform.WINDOWS)

;

private final DesiredCapabilities capabilities;

private final String browserName;

private final String version;

private final Platform platform;

Environments(final String browserName, final String version, final Platform platform) {

this.browserName = browserName;

this.version = version;

this.platform = platform;

capabilities = new DesiredCapabilities();

}

public DesiredCapabilities capabilities() {

capabilities.setBrowserName(browserName);

capabilities.setVersion(version);

capabilities.setPlatform(platform);

return this.capabilities;

}

public String browserName() {

return browserName;

}

}