Selenium WebDriver

Agenda

- What is Selenium WebDriver

- WebDriver Features and Drawbacks

- Working of Selenium WebDriver

- Download WebDriver API

- Associate WebDriver jars to Java Project in Eclipse

- Create WebDriver test case

- Execute test case on multiple browsers

What is Selenium WebDriver

➢ WebDriver is a web automation framework that allows you to execute your tests against different browsers.

➢ WebDriver is an Java Interface.

➢ WebDriver is an API(Application Programming Interface)

➢ WebDriver is one of the component of Selenium suite.

➢ WebDriver supports multiple languages(Java, C#, Python, ruby etc..)

➢ WebDriver automates only web based applications(It needs browser)

WebDriver Advantages & Limitations

Advantages:

1) Its open source(free)

2) Supports multiple Operating systems(Windows, Mac, Linux, Unix etc..)

3) Supports multiple languages(Java, C#, Python,...)

4) Support multiple browsers(Chrome, Firefox, IE , etc...)

5) Selenium can integrate third party tools

   Ex: AutoIT, Sikuli, Apache poi, TestNG, Extent reports etc...

Limitations:

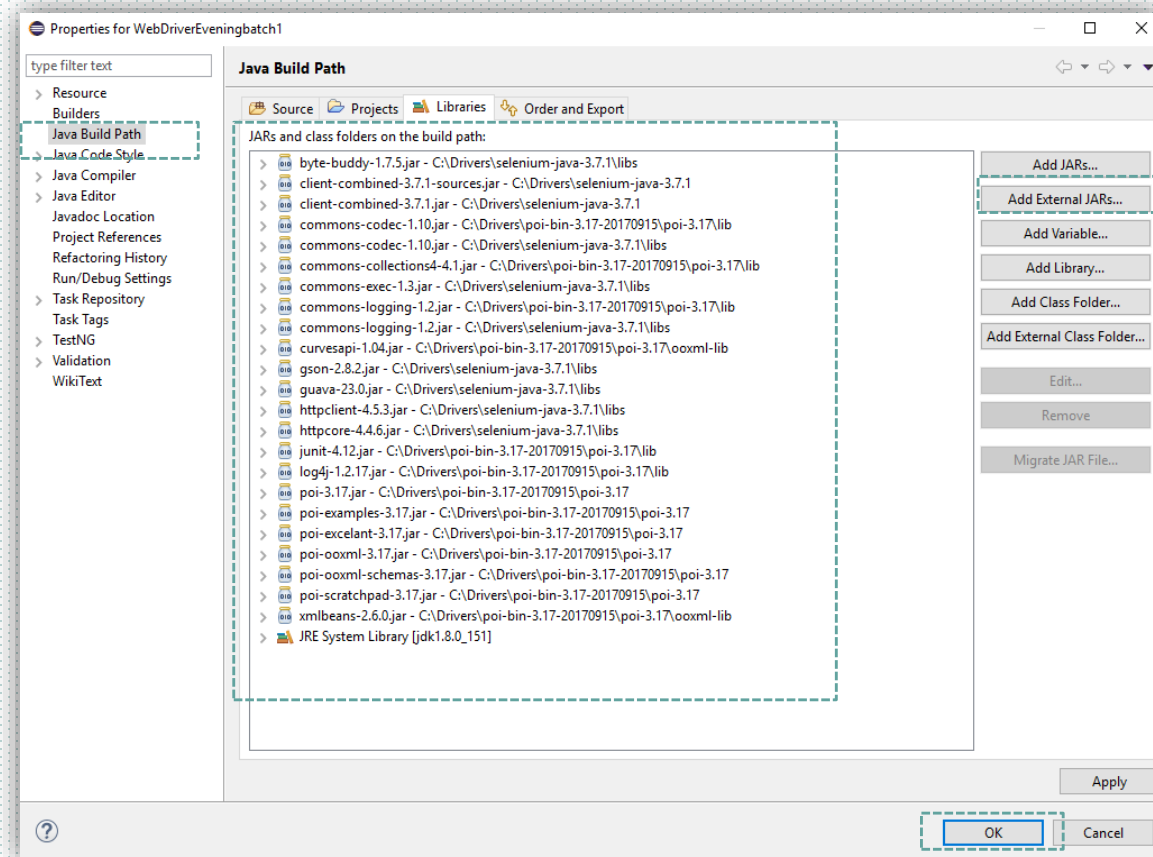1) Cannot automate desktop applications

2) Cannot automate images/graphs

Download WebDriver API

- http://www.seleniumhq.org/download/

Language	Client Version	Release Date			
Java	3.9.0	2018-02-05	Download	Change log	Javadoc
C#	3.8.0	2017-12-01	Download	Change log	API docs
Ruby	3.8.0	2017-12-01	Download	Change log	API docs
Python	3.9.0	2018-02-05	Download	Change log	API docs
Javascript (Node)	3.6.0	2017-10-06	Download	Change log	API docs

Associate WebDriver jars to Java Project in Eclipse

Right click on Project→ Properties→Java Build Path→Libraries→Add External Jars→Browse jar files→Open→OK

Browser Drivers

- **Firefox:** https://github.com/mozilla/geckodriver/releases/download/v0.19.1/geckodriver-v0.19.1-win64.zip

- **Chrome:** http://chromedriver.storage.googleapis.com/2.33/chromedriver_win32.zip

- **IE:** https://goo.gl/bn443g

- **Edge:** https://developer.microsoft.com/en-us/microsoft-edge/tools/webdriver/

System.setProperty()

busyQA.

- Chrome browser
System.setProperty("webdriver.chrome.driver", "C:/Drivers/chromedriver_win32/chromedriver.exe");
WebDriver driver=new ChromeDriver(); //ChromeDriver driver=new ChromeDriver();

- Firefox
System.setProperty("webdriver.gecko.driver", "C://Drivers/geckodriver-v0.23.0-win64/geckodriver.exe");
WebDriver driver=new FirefoxDriver(); //ChromeDriver driver=new ChromeDriver();

- IE Browser
System.setProperty("webdriver.ie.driver", "C://Drivers/IEDriverServer_Win32_3.14.0/IEDriverServer.exe");
WebDriver driver=new InternetExplorerDriver(); //ChromeDriver driver=new ChromeDriver();

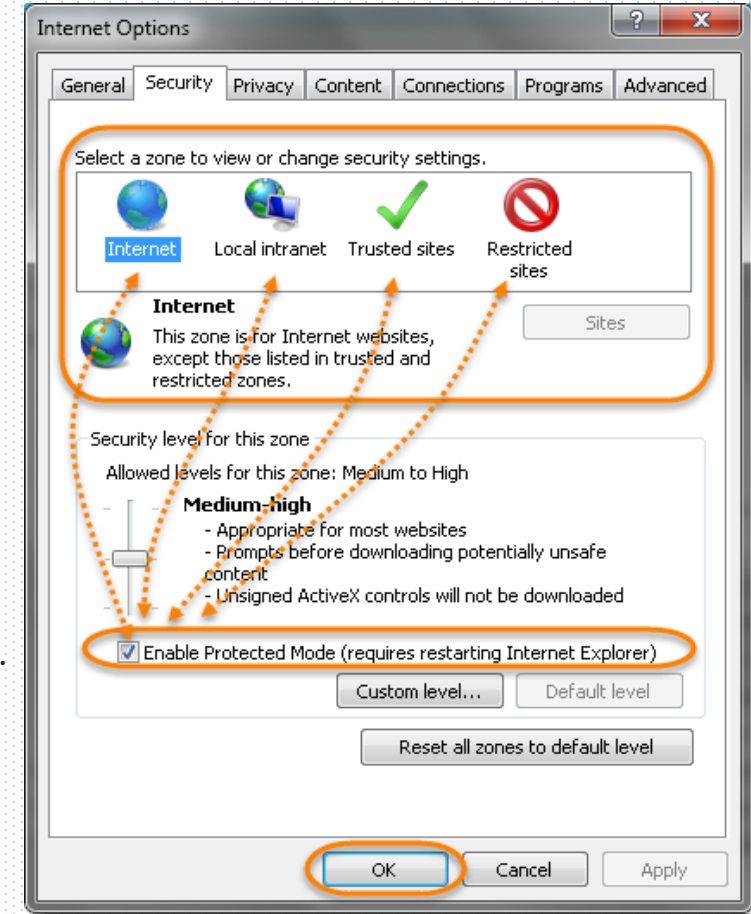- Microsoft Edge//OS Build no:17134.345 App: Microsoft Edge 42.17134.1.0
System.setProperty("webdriver.edge.driver", "C://Drivers/MicrosoftEdgeDriver/MicrosoftWebDriver.exe");
WebDriver driver = new EdgeDriver();

WebDriver Test Case

1. Open Web Browser.

2. Open URL http://opensource.demo.orangehrmlive.com

3. Enter username (Admin).

4. Enter password (admin).

5. Click on Login.

6. Capture title of the home page.

7. Verify title of the page: OrangeHRM

Challenges to run WebDriver Scripts with IE Browser

- The path to the driver executable must be set by the webdriver.ie.driver

- **Solution:** Need to add driver path to Environment variable.

- Protected Mode settings are not the same for all zones.

- **Solution:**

- *Protected Mode settings in IE Browser*

    1) **Go to Tools > Internet Options** and Under Internet Options click on the Security tab.

    2) Click on the **Internet zone** to Select a zone and to view its **Protected Mode** property.

    3) Now check the **Enable Protected Mode** check-box. Whichever one you choose,

    needs to be set for all the other zones. Means either it can be **OFF** for all the zones or ON for all the zones.

    4) Repeat this task for all the zones

    - Internet

    - Local Intranet

    - Trusted Sites

    - Restricted Sites

    5) Click *OK* and run the Selenium script again. It will work this time.

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Hand's on

- **Automate following test case using WebDriver.**

  Test Case

  1. Open Browser

  2. Open URL http://newtours.demoaut.com/

  3. Enter username (mercury)

  4. Enter password   (mercury)

  5. Click on Sign-in

  6. Capture the title of the page

  7. Validate Title of the page.

  8. Expected Title: Find a Flight: Mercury Tours: