SELENIUM

<u>INTRODUCTION:</u>

Automation tools like Selenium are used to beat the tedious challenges of manual testing.

Some of the main advantages for using Selenium are as follows:

Selenium is:

- Is an open-source tool that can automate any web browser and is available for free.
- Works with with any operating system (windows. linux, mac).
- Supports multiple environments and multiple programming languages (Java, C#, ruby, python, perl and php).
- Directly runs scripts for any web browser to automate the web application and test it.
  Is fast and easy to use even with large sets of data, and has a guaranteed accuracy.

Objective:

Create class "Webdriverbasic" with a webdriver script that

1. fetch Google's homepage
2. verify its title
3. print out the result of the comparison
4. close it before ending the entire program.

WebDriver Code:

Below is the actual WebDriver code for the logic presented by the scenario above

```java
package seleniumsessions;

// Import appropriate packages

import org.openqa.selenium.*;

import org.openqa.selenium.firefox.*;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.*;

//create class

public class Webdriverbasic {

    //Main method

    public static void main(String[] args) {


        //Chrome Browser

        System.setProperty("webdriver.chromeriver.exe.driver", "C:\\chromedriver.exe");
```

```java
//declaration and instantiation of object variables

WebDriver driver=new ChromeDriver();//using chrome browser

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


 //Get the actual value of  the title and print

String Title = driver.getTitle();

System.out.println(Title);


//Compare the actual value of the title and print if it is correct or incorrect

if(Title.equals("Google")) {

    System.out.println("correct title");

}

else {

      System.out.println("Incorrect title");

}

//Get the current url after launching chrome browser

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


//getPageSource method

System.out.println(driver.getPageSource());
```
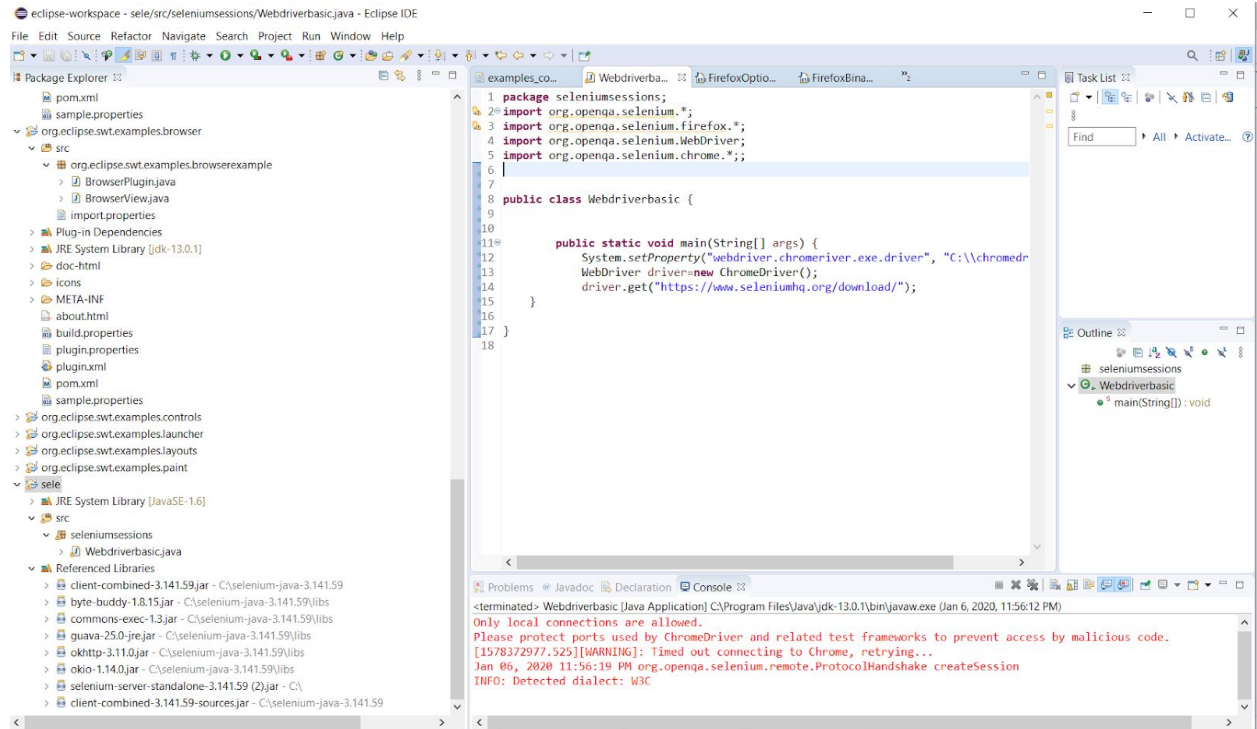
```
        //Quit the browser

        driver.quit();

    }

}
```

Create Webdriverbasic class and mporting Packages

The following two packages needs to be imported in order to get started:

1. **org.openqa.selenium.***- contains the WebDriver class needed to instantiate a new browser loaded with a specific driver
2. **org.openqa.selenium.chrome** - contains the chromeDriver class needed to instantiate a chromespecific driver onto the browser instantiated by the WebDriver class
3. **org.openqa.selenium.WebDriver** - contains the Wedriver class along with its methods to be invoked by the Webdriverbasic class.

Create class called ¨Webdriverbasic¨ with the main method. Ensure that the path for the chromedriver property is set correctly. Click on run - chrome browser should open and the browser should load the google.com webpage as follows.

eclipse-workspace - sele/src/seleniumsessions/Webdriverbasic.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer

- pom.xml
- sample.properties
- org.eclipse.swt.examples.browser
  - src
    - org.eclipse.swt.examples.browserexample
      - BrowserPlugin.java
      - BrowserView.java
    - import.properties
  - Plug-in Dependencies
  - JRE System Library [jdk-13.0.1]
  - doc-html
  - icons
  - META-INF
  - about.html
  - build.properties
  - plugin.properties
  - plugin.xml
  - pom.xml
  - sample.properties
- org.eclipse.swt.examples.controls
- org.eclipse.swt.examples.launcher
- org.eclipse.swt.examples.layouts
- org.eclipse.swt.examples.paint
- sele
  - JRE System Library [JavaSE-1.6]
  - src
    - seleniumsessions
      - Webdriverbasic.java
  - Referenced Libraries
    - client-combined-3.141.59.jar - C:\selenium-java-3.141.59
    - byte-buddy-1.8.15.jar - C:\selenium-java-3.141.59\libs
    - commons-exec-1.3.jar - C:\selenium-java-3.141.59\libs
    - guava-25.0-jre.jar - C:\selenium-java-3.141.59\libs
    - okhttp-3.11.0.jar - C:\selenium-java-3.141.59\libs
    - okio-1.14.0.jar - C:\selenium-java-3.141.59\libs
    - selenium-server-standalone-3.141.59 (2).jar - C:\
    - client-combined-3.141.59-sources.jar - C:\selenium-java-3.141.59

examples_co...   Webdriverba...   FirefoxOptio...   FirefoxBina...

```java
1  package seleniumsessions;
2  import org.openqa.selenium.*;
3  import org.openqa.selenium.firefox.*;
4  import org.openqa.selenium.WebDriver;
5  import org.openqa.selenium.chrome.*;;
6
7
8  public class Webdriverbasic {
9
10
11         public static void main(String[] args) {
12                System.setProperty("webdriver.chromeriver.exe.driver", "C:\\chromedr
13                WebDriver driver=new ChromeDriver();
14                driver.get("https://www.seleniumhq.org/download/");
15         }
16
17 }
18
```

Task List

Find   ▸ All ▸ Activate...

Outline

- seleniumsessions
- Webdriverbasic
  - main(String[]) : void

Problems Javadoc Declaration Console

<terminated> Webdriverbasic [Java Application] C:\Program Files\Java\jdk-13.0.1\bin\javaw.exe (Jan 6, 2020, 11:56:12 PM)
Only local connections are allowed.
Please protect ports used by ChromeDriver and related test frameworks to prevent access by malicious code.
[1578372977.525][WARNING]: Timed out connecting to Chrome, retrying...
Jan 06, 2020 11:56:19 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
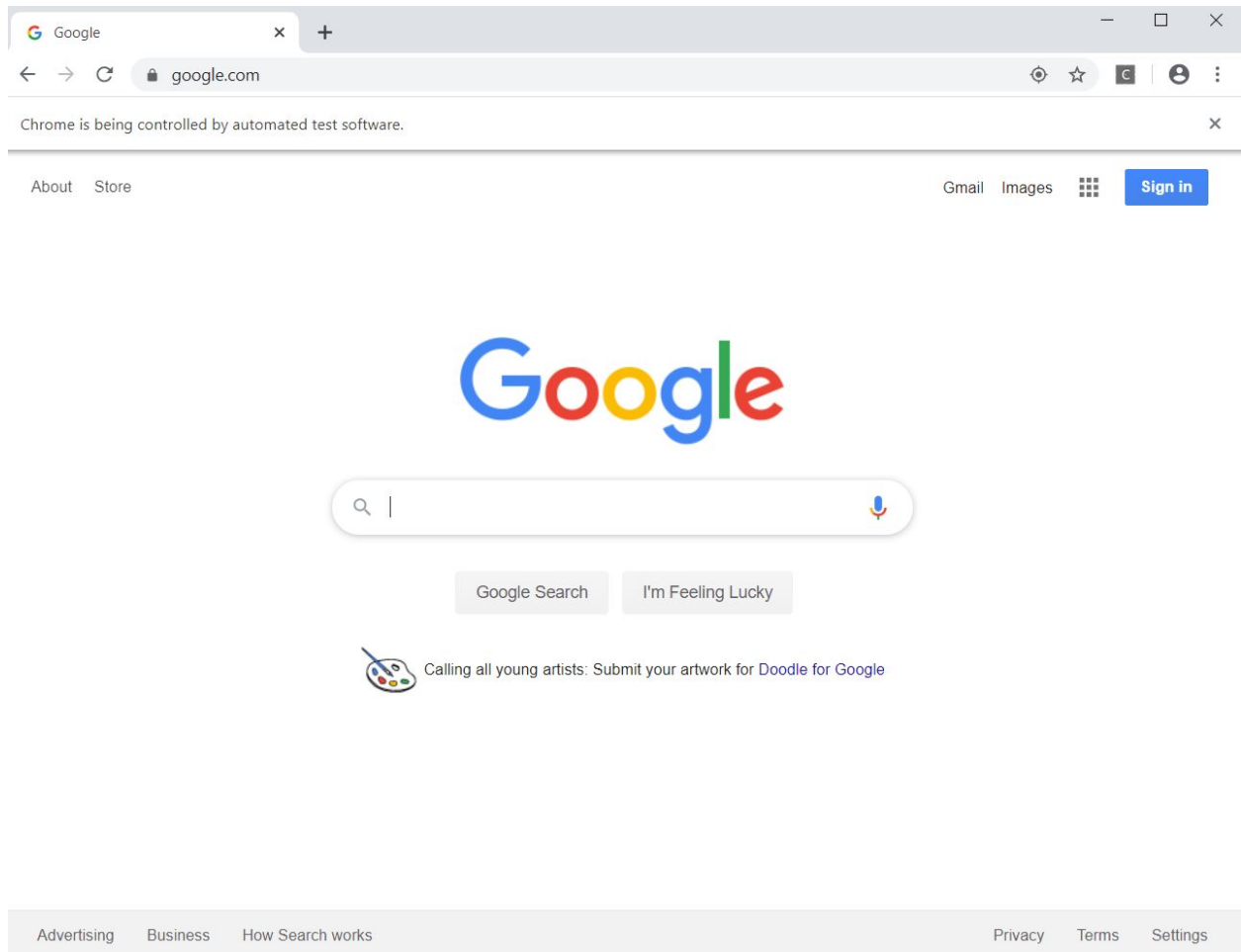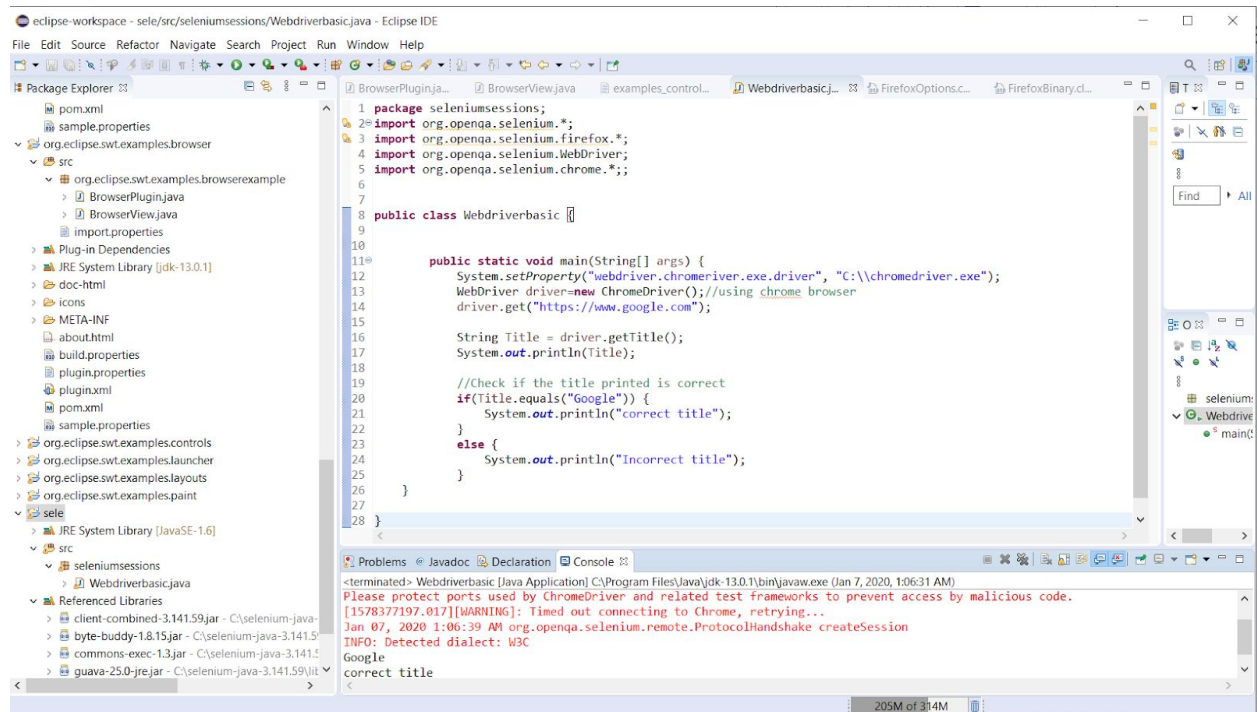
Get the actual page title:

The WebDriver class has the **getTitle()** method that is always used to obtain the page title of the currently loaded page.

The output displays the value "Google" . A chrome browser should open and the google.com page will be loaded automatically
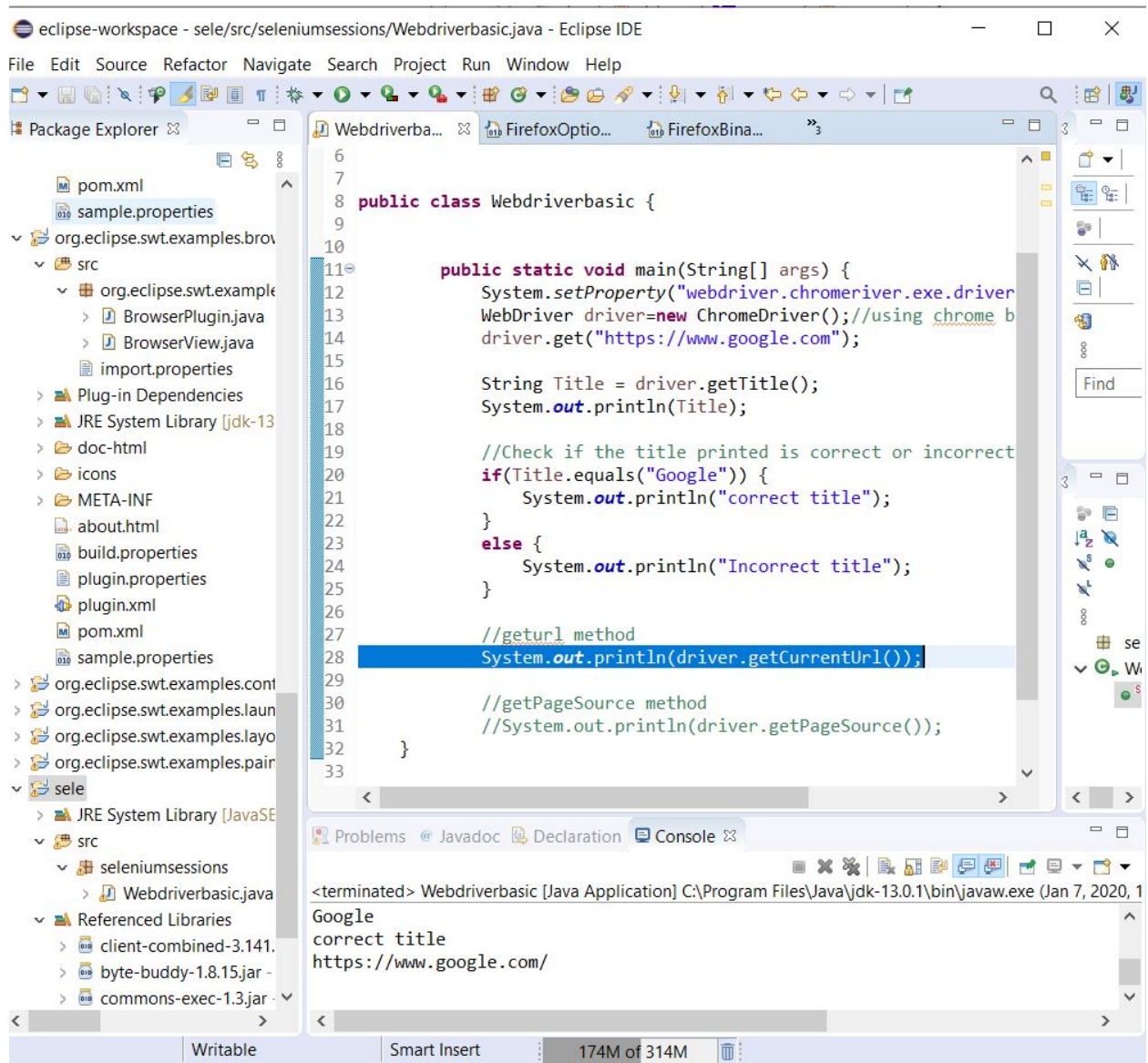
Compare the actual title of the page and print "Correct title" else print "Incorrect title"

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

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    - commons-exec-1.3.jar - C:\selenium-java-3.141.5
    - guava-25.0-jre.jar - C:\selenium-java-3.141.59\lit

Tabs: BrowserPlugin.ja... | BrowserView.java | examples_control... | Webdriverbasic.j... | FirefoxOptions.c... | FirefoxBinary.cl...

```java
1  package seleniumsessions;
2  import org.openqa.selenium.*;
3  import org.openqa.selenium.firefox.*;
4  import org.openqa.selenium.WebDriver;
5  import org.openqa.selenium.chrome.*;;
6
7
8  public class Webdriverbasic {
9
10
11     public static void main(String[] args) {
12         System.setProperty("webdriver.chromeriver.exe.driver", "C:\\chromedriver.exe");
13         WebDriver driver=new ChromeDriver();//using chrome browser
14         driver.get("https://www.google.com");
15
16         String Title = driver.getTitle();
17         System.out.println(Title);
18
19         //Check if the title printed is correct
20         if(Title.equals("Google")) {
21             System.out.println("correct title");
22         }
23         else {
24             System.out.println("Incorrect title");
25         }
26     }
27
28  }
```

Problems   @ Javadoc   Declaration   Console

```
<terminated> Webdriverbasic [Java Application] C:\Program Files\Java\jdk-13.0.1\bin\javaw.exe (Jan 7, 2020, 1:06:31 AM)
Please protect ports used by ChromeDriver and related test frameworks to prevent access by malicious code.
[1578377197.017][WARNING]: Timed out connecting to Chrome, retrying...
Jan 07, 2020 1:06:39 AM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Google
correct title
```

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Get the current url:

The WebDriver class has the **getCurrentUrl()** method that is always used to obtain the page c url of the currently loaded page.

The geturl method, should print "www.google.com" in the output and open the chrome browser and loads www.google.com webpage.

Get the actual page source:

The WebDriver class has the **getPageSource()** method that is always used to obtain the page source of the currently loaded page.
getPageSource() method will print the page source information and open the chrome browser and load google webpage.

About   Store

Gmail   Images   **Sign in**

Google

Google Search   I'm Feeling Lucky

Calling all young artists: Submit your artwork for Doodle for Google

Advertising   Business   How Search works

Privacy   Terms   Settings

Quit the Browser:

Use the driver.quit() to open and quit the bowser