

### Selenium Webdriver Architecture wrt Java.jpg

Added Dec 8, 2021 at 7:01 PM • 93.85 KB

ChromeDriver

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## ☒ Architecture Of Selenium WebDriver w.r.t java

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- ☐ Dotted lines represent **implements** (Keyword).
- ☐ Normal line represents **extends** (Keyword).

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## ☒ SearchContext(i)

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- ☐ It provides search mechanisms to search the elements in the webpage.
- ☐ It is an Interface which contains two abstract methods.
- ☐ 1.) **findElement()** - to search single element.

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☐ 1.) **findElement()** - to search single element.

☐ 2.) **findElements()** - to search multiple elements.

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☒ **TakesScreenshot (Interface)**

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☐ It Provides a way to take the page/element screenshot of the application under testing.

☐ It is an interface which contains only 01 abstract method i.e. **getScreenshotAs()**.

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Introduct

Selenium

When we  
Automati

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## ☒ JavascriptExecutor (Interface)

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- ☐ It is an interface which contains 2 abstract methods.
- ☐ It provides a way to write Javascript programs in selenium.
- ☐ 1.) **executeScript()** - to write synchronous Javascript program.
- ☐ 2.) **executeAsyncScript()** - to write asynchronous Javascript program.

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## ☒ WebDriver (Interface)

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- ☐ It provides a way to control the browser.

Introduc

Selenium

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- ☐ It provides a way to control the browser.
- ☐ It is an interface which has 11 abstract methods.
- ☐ 1.) **get()**
- ☐ 2.) **getTitle()**
- ☐ 3.) **getCurrentUrl()**
- ☐ 4.) **getPageSource()**
- ☐ 5.) **getWindowHandle()**
- ☐ 6.) **getWindowHandles()**
- ☐ 7.) **close()**
- ☐ 8.) **quit()**
- ☐ 9.) **navigate()**

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9.) **navigate()**

10.) **manage()**

11.) **switchTo()**

- ☐ This is the core interface of selenium, without which we cannot start automation because it contains main browser controlling methods.
- ☐ WebDriver is an object representing the browser, which can be used to control different browsers

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☒ **RemoteWebDriver (Concrete Class)**

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- ☐ It is an implementation concrete class for lot of interfaces in selenium and also it is used mainly to run the automation scripts from the host computer to the remote computer(Selenium Grid)

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computer to the remote computer(selenium only)

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### ☒ Browser Related Classes - 06

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- ☐ Browser related classes are used to perform:
  - ☐ 1.) starting their own servers(Driver Executable Software).
  - ☐ 2.) Launching their own respective browsers.
  - ☐ 3.) Applying some browser level settings.
- ☐ All the 06 browser related classes are concrete classes here, advantage of this is object can be created or else implementation will be done.



## Launching Empty Chrome Browser

in list [Selenium-Architecture](#)

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
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☒ Step 01: To Set the driver Executable Path.

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☐ **System.setProperty(String Key, String Value)** - Method

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- ☐ **System.setProperty(String Key, String Value)** - Method
- ☐ Here System is the Java Class
- ☐ This method will return **String**.
- ☐ This method will take two inputs/ parameters,
- ☐ **Key** represents - which Browser ?
- ☐ **Value** represents - path of the driver executable software?
- ☐ Ex:  
System.setProperty("webdriver.chrome.driver", "./drivers/chromedriver.exe");
- ☐ It's the best practice to store the driver software within the project directory and provide the relative path.
- ☐ DOT represents the current project.

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## ✓ Step 02: Instantiating the browser Specific Class

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- ☐ We need to create the object for the browser specific Class to Instantiate.
- ☐ ChromeDriver - It is the built in Class available in selenium Library.
- ☐ It is a concrete class having lot of non static methods through which we can perform automation on the browser.
- ☐ `ChromeDriver driver = new ChromeDriver();` --> Object Creation statement.
- ☐ NOTE: To use the browser related classes we should import them from the selenium package i.e. `org.openqa.selenium.chrome.*` (browser);
- ☐ If we had not set the path of the driver executable file properly then we will get **IllegalStateException**. of java.lang package. It is an unchecked Exception.

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