

## WebDriver (java) | IWebDriver (C#)

<b>driver = New ChromeDriver();</b> - openqa.selenium.Chrome;(JAVA) - OpenQA.Selenium.Chrome;(C#) <b>driver = New FirefoxDriver();</b> - openqa.selenium.Firefox; (JAVA) - OpenQA.Selenium.Firefox;(C#) <b>driver = New InternetExploreDriver();</b> - openqa.selenium.Ie; (JAVA) - OpenQA.Selenium.ie;(C#)	driver.get(String)	<b>Not Available</b>
	driver.close()	driver.Close()
	driver.quit()	driver.Quit()
	driver.getCurrentUrl()	driver.Url { get, set }
	driver.getTitle()	driver.Title { get }
	driver.getPageSource()	driver.PageSource { get }
	driver.getWindowHandle()	driver.CurrentWindowHandle; { get }
	driver.getWindowHandles()	driver.WindowHandles; { get }
	driver.findElement(By)	driver.FindElement(By)
	driver.findElements(By)	driver.FindElements(By)
	driver.manage()	driver.Manage()
	driver.navigate()	driver.Navigate()
	driver.switchTo()	driver.SwitchTo()

## Navigate (Java) | INavigate (c#)

<b>Java</b> navigate = driver.navigate(); - openqa.selenium.WebDriver.Navigation; <b>C#</b> Navigate = driver.Navigate(); - OpenQA.Selenium.IWebDriver.INavigation;	navigate.to(String)	Navigate GoToUrl(String)
	navigate.to(URL)	Navigate GoToUrl(URI)
	navigate.back();	Navigate Back();
	navigate.forward();	Navigate Forward();
	navigate.refresh();	Navigate Refresh();

## Options (Java) | IOptions (C#)

<b>Java</b> manage = driver.manage(); - openqa.selenium.WebDriver.Manage; <b>C#</b> manage = driver.Manage(); - OpenQA.Selenium.IWebDriver.IManage;	manage.getCookieNamed(String)	manage.Cookies.GetCookieNamed(String)
	manage.getCookies()	manage.Cookies.AllCookies { get }
	manage.addCookie(Cookie)	manage.Cookies.AddCookie(Cookie)
	manage.deleteCookie(Cookie)	manage.Cookies.DeleteCookie(Cookie)
	manage.deleteAllCookies()	manage.Cookies.DeleteAllCookies()
	manage.deleteCookieNamed(String)	manage.Cookies.DeleteCookieNamed(String)
	manage.timeout()	manage.TimeOut()
	manage.window()	manage.Window { get }
	manage.ime()	<b>Not Available</b>
	manage.log()	manage.Log { get }

## TargetLocator (Java) | ITargetLocator (C#)

<b>Java</b>	<code>switchTo.activeElement()</code>	<code>switchTo.ActiveElement()</code>
<code>switchTo = driver.switchTo();</code>	<code>switchTo.alert()</code>	<code>switchTo.Alert()</code>
- <code>openqa.selenium.WebDriver.SwitchTo;</code>	<code>switchTo.frame(int)</code>	<code>switchTo.Frame(int)</code>
<b>C#</b>	<code>switchTo.frame(String)</code>	<code>switchTo.Frame(String)</code>
<code>switchTo = driver.SwitchTo();</code>	<code>switchTo.frame(WebElement)</code>	<code>switchTo.Frame(WebElement)</code>
- <code>OpenQA.Selenium.IWebDriver.ISwitchTo;</code>	<code>switchTo.window(String)</code>	<code>switchTo.Window(String)</code>
		<code>switchTo.parentFrame()</code>

## WebElement (Java) | IWebElement (C#)

<b>Java</b>	<code>webElement.clear();</code>	<code>webElement.Clear();</code>
<code>webElement =</code>	<code>webElement.click();</code>	<code>webElement.Click();</code>
<code>driver.findElement(By);</code>	<code>webElement.sendKeys(charSequence)</code>	<code>webElement.Sendkeys(String)</code>
- <code>openqa.selenium.WebElement;</code>	<code>webElement.submit();</code>	<code>webElement.Submit();</code>
<b>C#</b>	<code>webElement.getText();</code>	<code>webElement.Text { get }</code>
<code>webElement = driver.FindElement</code>	<code>webElement.getAttribute();</code>	<code>webElement.GetAttribute();</code>
<code>(By);</code>	<code>webElement.getCssValue();</code>	<code>webElement.GetCssValue();</code>
- <code>OpenQA.Selenium.IWebElement;</code>	<code>webElement.getLocation();</code>	<code>webElement.Location { get }</code>
	<code>webElement.getTagName();</code>	<code>webElement.TagName { get }</code>
	<code>webElement.getSize();</code>	<code>webElement.Size() { get }</code>
	<code>webElement.getRect();</code>	<b>Not Available</b>
	<code>webElement.getScreenshotAs(OutputType&lt;x&gt;)</code>	<b>Not Available</b>
	<code>webElement.isDisplayed();</code>	<code>webElement.Displayed { get }</code>
	<code>webElement.isEnabled();</code>	<code>webElement.Enabled { get }</code>
	<code>webElement.isSelected();</code>	<code>webElement.Selected { get }</code>
	<code>webElement.findElement(By)</code>	<code>webElement.FindElement(By)</code>
	<code>webElement.findElements(By)</code>	<code>webElement.FndElements(By)</code>
	---	<code>webElement.GetProperty(String)</code>

## Timeouts (Java) | ITimeouts (C#)

<b>Java</b>	<code>timeouts.implicitlyWait(long, TimeUnit)</code>	<code>timeouts.ImplicityWait {get,set}</code>
<code>timeouts = driver.manage().timeouts();</code>	<code>timeouts.pageLoadTimeout(long, TimeUnit)</code>	<code>timeouts.PageLoad {get,Set}</code>
- <code>openqa.selenium.WebDriver.Timeouts;</code>	<code>timeouts.setScriptTimeout(long, TimeUnit)</code>	<b>Not Available</b>
<b>C#</b>	<b>Not Available</b>	<code>timeouts.Asynchronous JavaScript</code>
<code>timeouts = driver.manage().timeouts();</code>		
- <code>OpenQA.Selenium.IWebDriver.ITimeouts;</code>		

## Window (Java) | IWindow (C#)

<b>Java</b> window = driver.manage().window(); - openqa.selenium.WebDriver.Window; <b>C#</b> window = driver.manage().window(); - OpenQA.Selenium.IWebDriver.IWindow;	window.Timeouts.fullscreen()	window.Fullscreen()
	window.getPosition()	window.Position {get, set}
	window.setPosition()	
	window.getSize()	window.Size {get, set}
	window.setSize()	
	window.maximize()	window.Maximize()
	<b>Not Available</b>	window.Minimize()

## Alert (Java) | IAlert (C#)

<b>Java</b> alert = driver.manage().alert(); - openqa.selenium.WebDriver.Alert; <b>C#</b> alert = driver.manage().timeouts(); - OpenQA.Selenium.IWebDriver.IAlert;	alert.accept();	alert.Accept();
	alert.dismiss();	alert.Dismiss();
	alert.getText();	alert.Text; - {get}
	alert.sendKeys(String);	alert.SendKeys(String);
	<b>Not Available</b>	alert.SetAuthenticationCredentials(String, String)

## Point (Java) | IPoint (C#)

<b>Java</b> point = driver.findElement(By).getLocation(); - openqa.selenium.WebDriver.Point; <b>C#</b> point = driver.findElement(By).getLocation(); - OpenQA.Selenium.IWebDriver.Point;	point.getx()	point.X {get, set}
	point.gety()	point.Y {get, set}
	point.move(int, int)	<b>Not Available</b>
	point.moveBy(int, int)	<b>Not Available</b>
	<b>Not Available</b>	point.isEmpty {get} :::

## Action (Java) | IAction (C#)

<b>Java</b> Actions action = new Actions(driver) - openqa.selenium.Interacti ons.Actions;  <b>C#</b> Actions action = new Actions(driver) - OpenQA.Selenium.Interact ions.Actions;	action.click()	action.Click()
	action.click(webElement)	action.Click(WebElement)
	action.clickAndHold()	action.ClickAndHold()
	action.clickAndHold(WebElement)	action.ClickAndHold(WebElement)
	action.contextClick()	action.ContextClick()
	action.contextClick(WebElement)	action.ContextClick(WebElement)
	action.doubleClick()	action.DoubleClick()
	action.doubleClick(WebElement)	action.DoubleClick(WebElement)
	action.dragAndDrop(WebElement, WebElement)	action.DragAndDrop(WebElement, WebElement)
	action.dragAndDrop(WebElement, int,int)	action.DragAndDropToOffset(WebE lement,int,int)
	action.keyDown(Charsequences)	action.KeyDown(String)
	action.keyDown(webElement, charsequences)	action.KeyDown(webElement, String)
	action.keyUp(charSequence)	action.KeyUp(String)
	action.keyUp(WebElement, charSequences)	action.KeyUp(WebElement, String)
	action.moveByOffset(int, int)	action.MoveByOffset(int, int)
	action.moveToElement(WebElem ent)	action.MoveToElement(WebEleme nt)
	action.moveToElement(WebElem ent,int,int)	action.MoveToElement(WebEleme nt,int,int)
	action.pause(duration)	<b>Not Available</b>
	action.pause(long)	<b>Not Available</b>
	action.perform()	action.Perform()
	action.release()	action.Release()
	action.release(WebElement)	action.Release(WebElement)
	action.sendKeys(charSequence)	action.Sendkeys(String)
	action.sendKeys(WebElement,char Sequence)	action.Sendkeys(WebElement,charS equence)
	action.tick(action)	<b>Not Available</b>
	action.tick(interaction)	<b>Not Available</b>

## TargetLocator / DIMENSION

TargetLocator	driver.switchTo().frame
TargetLocator	driver.switchTo().Window
TargetLocator	driver.switchTo().activeElement
DIMENSION	driver.findElement(By).getSize



## Selenium - Java / C# Version

Above details originated from given Selenium version

Selenium Java – 3.141.59

Selenium C# - 3.141.0

## Selenium Release Notes: (2.53 TO 3.141)

### 1) V2.53 - Final Release in 2.XX

- a. NoSuchSessionException – Introduce – This exception will occur when try to access browser after browser.quit().
- b. Fixes in Member leak
- c. Updated Expected Condition
- d. Firefox support only **v46 and below**.

### 2) V 3.0.0 – B1 | B2 | B3 | B4 | Final

- a. Java 8+
- b. RC API Separated (only available for leg-rc package)
- c. Firefox support be removed from core legacy, need to use GeckoDriver for Firefox support from **v47.0.1 or earlier**
- d. Firefox profile passed to both legacy FirefoxDriver and GeckoDriver.
- e. MS -> IE Driver provide service for V9 (or) above.
- f. MS -> Support for Edge via Edge Driver
- g. Mac -> support for Safari via safari driver (as part of safari 10)
- h. SessionNotFoundException is removed (Deprecated) favour of NoSuchSessionException
- i. Stability fix in grid

### 3) V 3.0.1

- a. Include ElementScrollBehaviour enum in the release.
- b. Update in HtmlUnit (Dependency) / Grid (new session)
- c. Firefox driver clean up for file system.

### 4) V 3.1.0

- a. Update Wait and fluent Wait for java 8, require to update guava-v21.0
- b. Selenium server - introduce new '-version' server.
- c. WebElement.getText will return text from shadow DOM.
- d. ChromeDriver support 'new connection' interface.

### 5) V 3.3.0

- a. Support for GeckoDriver 0.15.0

### 6) V 3.3.1

- a. Support for GeckoDriver 0.15.0 notably, exception returned from remote end unwrapped properly.

### 7) V 3.4.0

- a. GeckoDriver 0.16.0 Strongly recommended.
- b. Better support for W3C endpoints.
- c. requiredCapabilities removed use desiredCapabilities instead.

### 8) V 3.5.0

- a. New standalone server and grid node feature for "pass through" Mode.
- b. Guava 21+ and lambda being used in expected condition.
- c. Better handling for getText() for shadow DOM.

### 9) V3.6.0

- a. Added Interactive interface to EventFiringDriver
- b. Now Option Class extend 'MutableCapabilities'

## Selenium Release Notes: (2.53 TO 3.141)

- c. Add option to start firefox and chrome in headless mode.

### 10) V 3.7.0

- a. Minimise the disk space when starting new remote connection.  
b. Safari driver  
i. Moving some safari config option from safariOption to the safariDriverservice.  
c. Better error message for htmlrunner.  
d. Migrated from using 'DesiredCapabilities' to either 'mutableCapabilities' or (perfectly) 'immutableCapabilities'

### 11) V 3.141.59 (Latest – Dec-2018)

- a. Restored Remote Host support  
b. Fix in help servlet.

#### Calculation :

Version 3 release mostly covered.

- The changes in geckoDriver / SafariDriver support.
- Java 8 / Guava / Shadow Dom / W3C compatibilities
- Selenium Standalone server / Grid Issue Fixes

## Version Details for drivers, Test Framework , BDD Framework (As of Dec'18)

ChromeDriver Support		FirefoxDriver Support			IEDriver Support		
Chrome Driver	Chrome Browser	Gecko Driver	Firefox Browser	Selenium	IE Driver	IE Browser	
V 2.45	V70 – V72	V 0.23.0	V 57+	3.11 or earlier	V 3.6.0 +	IE 7,8,9,10, 11	
V 2.44	V69 – V71	V 0.22.0	V 57+		Selenium not support with IE 6		
V 2.23	V69 – V71	V 0.21.0	V 57+				
V 2.42	V68 – V70	V 0.20.1	V 55+	3.5 or earlier			
V 2.41	V67 – V69	V 0.20.0	V 55+				
V 2.40	V66 – V68	V 0.19.1	V 55+				
V 2.39	V66 – V68	V 0.19.0	V 55+	3.4 or earlier			
V 2.38	V65 – V67	V 0.19.0	V 53+				
V 2.37	V64 – V66	V 0.17.0	V 52+				
V 2.36	V63 – V65	Selenium 2.53 support – Firefox V46					
V 2.35	V62 – V64						
V 2.34	V61 – V63						
V 2.33	V60 – V62						
V 2.32	V61 – V62+						
V 2.31	V 58+						
V 2.30	V58 – V60						
V 2.29	V 57+						
V 2.28	V 57+						
V 2.25	V 54+						
V 2.21	V 51+						
V2.19	V 44+						
V2.15	V 42+						

EdgeDriver Support	
Edge Driver	Edge Browser
V 6.17134	V 17.17134
V 5.16299	V 16.16299
V 4.15063	V 15.15063
V 3.14393	V 14.14393
V 2.10586	V 13.10586
V 1.10240	V 12.10240

JUnit	
JUnit	
V5 (5.3.2 –Nov'18 to 5.0 – Jul'16)	
V4 (4.12 – Dec 2014 to 4.0 – Feb'2006 )	
V3 – (3.8 – May 2007 to 3.0 )	

TestNG	
TestNG	
V 7 (7.0 Beta – Sep 18)	
V 6 ( 6.14.3 – Apr 2018 TO 6.0 –Mar-2011) – 6.9	
V5 (5.14.10 – Feb 2010 TO 5.0 Jul-2010)	
V4 (4.7 – Jul 2010 TO 4.4 – Jul 2010)	

## Version Details for drivers, Test Framework , BDD Framework (As of Dec'18)

C # - .Net – Visual studio Version			Specflow – TechTalk Specflow Team		<a href="#">Nunit</a>	
C#	.Net Framework	Visual Studio	Visual Studio	Specflow	Nunit	Support
V 1.0	.Net 1.0/1.1	V 2002	V 2010	1.9.2	V 3.11.0	.Net 2.0+ & .Net Core & .Net Std 1.6+   NuGet 2.12 +
V 2.0	.Net 2.0	V 2005	V 2012	1.9.2	V 3.10.0/ V 2.10.1	.Net 2.0+ & .Net Core & .Net Std 1.6+   NuGet 2.12 +
V 3.0	.Net 3.0/3.5	V 2008	V 2013	2.7	V 3.9.0 to V 3.0.0	Window 8   .Net 2.0+ & .Net Core
V4.0	.Net 4.0	V 2010	V 2015	2.7	V 2.6.7 to V 2.6.1	.Net 2.0+
V 5.0	.Net 4.5	V 2012 /V 2013	V 2017	2.7		
V 6.0	.Net 4.6	V 2013 /V 2015				
V 7.0	.Net Core	V 2017				

  

Rest Assured		Cucumber Java (io.cucumber)	
Version	Details	Version	Details
V3 .2	V3.2.0 - Oct 2018	V4.x	V4.0.0 TO 4 .2.0 - Oct 2018
V 3.1	V3.1.1 - Aug 2018	V3.X	V3.0.1 to 3.0.2 – May 2018
	V3.1.0 – Apr 2018	V2.X	V2.4.0 – Mar 2018
V3.0	V3.0.7 – Feb 2018		V2.0.0 – Aug 2017
	V3.0.0 – Jun 2016		
V2.0	V2.9.0 – Mar 2016		
	V2.0.0 – Nov 2013		
V 1.0	V1.9.0 – Nov 2013		
	V 1.0.0 – Dec 2010		
**Developed by 'com.jayway.restassured' till V2.9			
**' Developed by 'io.rest-assured' from V3			

## Migration from Junit 4 to Junit 5

- Annotations reside in the org.junit.jupiter.api package.
- Assertions reside in org.junit.jupiter.api.Assertions
- @Before and @After no longer exist; use @BeforeEach and @AfterEach instead.
- @BeforeClass and @AfterClass no longer exist; use @BeforeAll and @AfterAll instead.
- @Ignore no longer exists; use @Disabled or one of the other built-in execution conditions instead
- @Category no longer exists; use @Tag instead.
- @RunWith no longer exists; superseded by @ExtendWith.
- @Rule and @ClassRule no longer exist; superseded by @ExtendWith and @RegisterExtension

## JUNIT 5

