



Initialize

```
' NuGet: Selenium.WebDriver.ChromeDriver
Imports OpenQA.Selenium.Chrome
Private driverField As IWebDriver = New ChromeDriver()
' NuGet: Selenium.Mozilla.Firefox.WebDriver;file:///D:/pdfmaker/assets/
mvup.png
Private driverField1 As IWebDriver = New FirefoxDriver()
Imports OpenQA.Selenium.Firefox
' NuGet: Selenium.WebDriver.IEDriver
Imports OpenQA.Selenium.IE
Private driverField2 As IWebDriver = New InternetExplorerDriver()
' NuGet: Selenium.WebDriver.EdgeDriver
Imports OpenQA.Selenium.Edge
Private driver As IWebDriver = New EdgeDriver()
```

Locators

```
_driver.FindElement(By.ClassName("className"))
_driver.FindElement(By.CssSelector("css"))file:///D:/pdfmaker/assets/
nwcl.png
_driver.FindElement(By.Id("id"))
_driver.FindElement(By.LinkText("text"))
_driver.FindElement(By.Name("name"))
_driver.FindElement(By.PartialLinkText("pText"))
_driver.FindElement(By.TagName("input"))
_driver.FindElement(By.XPath("//*[@id='editor']"))
' Find multiple elements
Dim anchors As IReadOnlyCollection(Of IWebElement) =
_driver.FindElements(By.TagName("a"))
' Search for an element inside another
Dim div =
_driver.FindElement(By.TagName("div")).FindElement(By.TagName("a"))
```

Basic Elements Operations

```
Dim element = _driver.FindElement(By.Id("id"))
element.Click()
element.SendKeys("someText")
element.Clear()
element.Submit()
Dim innerText = element.Text
Dim isEnabled = element.Enabled
Dim isDisplayed = element.Displayed
Dim isSelected = element.Selected
Dim element = _driver.FindElement(By.Id("id"))
Dim [select] As SelectElement = New SelectElement(element)
[select].SelectByIndex(1)
[select].SelectByText("Ford")
[select].SelectByValue("ford")
[select].DeselectAll()
[select].DeselectByIndex(1)
[select].DeselectByText("Ford")
[select].DeselectByValue("ford")
Dim selectedOption = [select].SelectedOption
Dim allSelected = [select].AllSelectedOptions
Dim isMultipleSelect = [select].IsMultiple
```

Basic Browser Operations

```
' Navigate to a page
_driver.Navigate().GoToUrl("http://google.com")
' Get the title of the page
Dim title = _driver.Title
' Get the current URL
Dim url = _driver.Url
' Get the current page HTML source
Dim html = _driver.PageSource
```

Advanced Element Operations

```
' Drag and Drop
Dim element = _driver.FindElement(By.XPath(
"//*[@id='project']/p[1]/div/div[2]"))
Dim move As Actions = New Actions(_driver)
move.DragAndDropToOffset(element, 30, 0).Perform()
' How to check if an element is visible
Assert.IsTrue(_driver.FindElement(
By.XPath("//*[@id='tve_editor']/div")).Displayed)
' Upload a file
Dim element = _driver.FindElement(By.Id("RadUpload1file0"))
Dim filePath = "D:\WebDriver.Series.Tests\WebDriver.xml"
element.SendKeys(filePath)
' Scroll focus to control
Dim link = _driver.FindElement(By.PartialLinkText("Previous post"))
Dim js = String.Format("window.scroll(0, {0});", link.Location.Y)
CType(_driver, IJavaScriptExecutor).ExecuteScript(js)
link.Click()
' Taking an element screenshot
Dim element = _driver.FindElement(By.XPath(
"//*[@id='tve_editor']/div"))
Dim cropArea = New Rectangle(element.Location, element.Size)
Dim bitmap = bmpScreen.Clone(cropArea, bmpScreen.PixelFormat)
bitmap.Save(fileName)
' Focus on a control
Dim link = _driver.FindElement(By.PartialLinkText("Previous post"))
' Wait for visibility of an element
Dim wait As WebDriverWait = New WebDriverWait(_driver,
TimeSpan.FromSeconds(30))
wait.Until(ExpectedConditions.VisibilityOfAllElementsLocatedBy(
By.XPath("//*[@id='tve_editor']/div[2]/div[2]/div/div")))
End Sub
```

Advanced Browser Operations

```
' Handle JavaScript pop-ups
Dim a As IAlert = _driver.SwitchTo().Alert()
a.Accept()
a.Dismiss()
' Switch between browser windows or tabs
Dim windowHandles = _driver.WindowHandles
Dim firstTab As String = windowHandles.First()
Dim lastTab As String = windowHandles.Last()
_driver.SwitchTo().Window(lastTab)
' Navigation history
_driver.Navigate().Back()
_driver.Navigate().Refresh()
_driver.Navigate().Forward()
' Option 1.
link.SendKeys(String.Empty)
' Option 2.
CType(_driver,
IJavaScriptExecutor).ExecuteScript("arguments[0].focus();", link)
' Maximize window
_driver.Manage().Window.Maximize()
' Add a new cookie
Dim cookie As Cookie = New Cookie("key", "value")
_driver.Manage().Cookies.AddCookie(cookie)
' Get all cookies
Dim cookies = _driver.Manage().Cookies.AllCookies
' Delete a cookie by name
_driver.Manage().Cookies.DeleteCookieNamed("CookieName")
' Delete all cookies
_driver.Manage().Cookies.DeleteAllCookies()
' Taking a full-screen screenshot
Dim screenshot As Screenshot = CType(_driver,
ITakesScreenshot).GetScreenshot()
screenshot.SaveAsFile("pathToImage")
' Wait until a page is fully loaded via JavaScript
Dim wait As WebDriverWait = New WebDriverWait(_driver,
TimeSpan.FromSeconds(30))
wait.Until(Function(x) CType(_driver,
IJavaScriptExecutor).ExecuteScript("return d
ocument.readyState" ).Equals("complete"))
' Switch to frames
_driver.SwitchTo().Frame(1)
_driver.SwitchTo().Frame("frameName")
Dim element = _driver.FindElement(By.Id("id"))
_driver.SwitchTo().Frame(element)
' Switch to the default document
_driver.SwitchTo().DefaultContent()
```

Advanced Browser Configurations

```
' Use a specific Firefox profile
Dim profileManager As FirefoxProfileManager = New
FirefoxProfileManager()
Dim profile As FirefoxProfile =
profileManager.GetProfile("HARDDISKUSER")
Dim driver As IWebDriver = New FirefoxDriver(profile)
' Set a HTTP proxy Firefox
Dim firefoxProfile As FirefoxProfile = New FirefoxProfile()
firefoxProfile.SetPreference("network.proxy.type", 1)
firefoxProfile.SetPreference("network.proxy.http", "myproxy.com")
firefoxProfile.SetPreference("network.proxy.http_port", 3239)
Dim driver As IWebDriver = New FirefoxDriver(firefoxProfile)
' Set a HTTP proxy Chrome
Dim options As ChromeOptions = New ChromeOptions()
Dim proxy = New Proxy()
proxy.Kind = ProxyKind.Manual
proxy.IsAutoDetect = False
proxy.HttpProxy = "127.0.0.1:3239"
proxy.SslProxy = "127.0.0.1:3239"
options.Proxy = proxy
options.AddArgument("ignore-certificate-errors")
Dim driver As IWebDriver = New ChromeDriver(options)
' Accept all certificates Firefox
Dim firefoxProfile As FirefoxProfile = New FirefoxProfile()
firefoxProfile.AcceptUntrustedCertificates = True
firefoxProfile.AssumeUntrustedCertificateIssuer = False
Dim driver As IWebDriver = New FirefoxDriver(firefoxProfile)
' Accept all certificates Chrome
Dim capability As DesiredCapabilities = DesiredCapabilities.Chrome()
Environment.SetEnvironmentVariable("webdriver.chrome.driver",
"C:\PathToChromeDriver.exe")
capability.SetCapability(CapabilityType.AcceptSslCertificates, True)
Dim driver As IWebDriver = New RemoteWebDriver(capability)
' Set Chrome options.
Dim options As ChromeOptions = New ChromeOptions()
Dim dc As DesiredCapabilities = DesiredCapabilities.Chrome()
dc.SetCapability(ChromeOptions.Capability, options)
Dim driver As IWebDriver = New RemoteWebDriver(dc)
' Turn off the JavaScript Firefox
Dim profileManager As FirefoxProfileManager = New
FirefoxProfileManager()
Dim profile As FirefoxProfile =
profileManager.GetProfile("HARDDISKUSER")
profile.SetPreference("javascript.enabled", False)
Dim driver As IWebDriver = New FirefoxDriver(profile)
' Set the default page load timeout
driver.Manage().Timeouts().SetPageLoadTimeout(New TimeSpan(10))
' Start Firefox with plugins
Dim profile As FirefoxProfile = New FirefoxProfile()
profile.AddExtension("C:\extensionsLocation\extension.xpi")
Dim driver As IWebDriver = New FirefoxDriver(profile)
' Start Chrome with an unpacked extension
Dim options As ChromeOptions = New ChromeOptions()
options.AddArguments("load-extension=/pathTo/extension")
Dim capabilities As DesiredCapabilities = New DesiredCapabilities()
capabilities.SetCapability(ChromeOptions.Capability, options)
Dim dc As DesiredCapabilities = DesiredCapabilities.Chrome()
dc.SetCapability(ChromeOptions.Capability, options)
Dim driver As IWebDriver = New RemoteWebDriver(dc)
' Start Chrome with a packed extension
Dim options As ChromeOptions = New ChromeOptions()
options.AddExtension(Path.GetFullPath("localpathTo/extension.crx"))
Dim capabilities As DesiredCapabilities = New DesiredCapabilities()
capabilities.SetCapability(ChromeOptions.Capability, options)
Dim dc As DesiredCapabilities = DesiredCapabilities.Chrome()
dc.SetCapability(ChromeOptions.Capability, options)
Dim driver As IWebDriver = New RemoteWebDriver(dc)
' Change the default files' save location
Dim downloadFolderPath = "c:\temp"
Dim profile As FirefoxProfile = New FirefoxProfile()
profile.SetPreference("browser.download.folderList", 2)
profile.SetPreference("browser.download.dir", downloadFolderPath)
profile.SetPreference("browser.download.manager.alertOnEXEOpen",
False)
profile.SetPreference("browser.helperApps.neverAsk.saveToDisk",
"application/msword, application/binary, application/ris, text/csv,
image/png, application/pdf, text/html, text/plain, application/zip,
application/x-zip, application/x-zip-compressed,
application/download, application/octet-stream");
Dim driver As IWebDriver = New FirefoxDriver(profile)
```