Advanced Browser Manipulation

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Overview

Control browser size and position

Switch between tabs

Handle simple alert popups

Handle confirmation popups

Manipulate cookies

Save screenshots

Execute arbitrary JavaScript on the page

Advanced interactions with actions

Other advanced techniques

Building Advanced Interactions with Actions

```csharp
using OpenQA.Selenium.Interactions;

using (IWebDriver driver = new ChromeDriver())
{
    driver.Navigate().GoToUrl(HomeUrl);

    IWebElement applyLink = driver.FindElement(By.Id("Apply"));

    Actions actions = new Actions(driver);

    actions.MoveToElement(applyLink);

    actions.Click();

    actions.Perform();

    // etc.
}
```

Building Advanced Interactions with Actions

```
Click()

ClickAndHold()

ContextClick()

DoubleClick()

KeyDown()

KeyUp()

MoveByOffset()

SendKeys()

Etc.
```

Building Advanced Interactions with Actions

```
https://selenium.dev/selenium/docs/api/dotnet/html/T_OpenQA_Selenium_Inter
actions_Actions.htm
```

http://bit.ly/psseleniumactions

Other Advanced Techniques

```
driver.Manage().Timeouts().PageLoad = TimeSpan.FromSeconds(10);

// ChromeDriver default: 5 minutes

// WebDriverTimeoutException


driver.Manage().Timeouts().AsynchronousJavaScript =
TimeSpan.FromSeconds(10);

// ChromeDriver default: 30 seconds

// Only affects ExecuteAsyncScript(...)


string htmlSource = driver.PageSource;
```

Other Advanced Techniques

```csharp
ChromeOptions options = new ChromeOptions();


options.AcceptInsecureCertificates = true;

options.BinaryLocation = @"C:\my custom chrome exe location";

options.AddExtension("path to .crx file");


Proxy proxy = new Proxy();

proxy.Kind = ProxyKind.Manual;

options.Proxy = proxy;
```

Other Advanced Techniques

```csharp
// Chrome command line options

options.AddArgument("--incognito");

options.AddArgument("--disable-gpu");

options.AddArgument("--start-maximized");

// https://chromedriver.chromium.org/capabilities


IWebDriver driver = new ChromeDriver(options);
```

Summary

```
driver.Manage().Window.Maximize();

driver.SwitchTo().Window(contactTab);

driver.SwitchTo().Alert();

alertBox.Dismiss();

driver.Manage().Cookies.AddCookie(...);

screenShotDriver.GetScreenshot();

IJavaScriptExecutor

new Actions(driver);

new ChromeOptions();
```

Next:

Creating Easy to Maintain Selenium Test Code