ULTIMATE CHEAT SHEET FOR SELENIUM C#
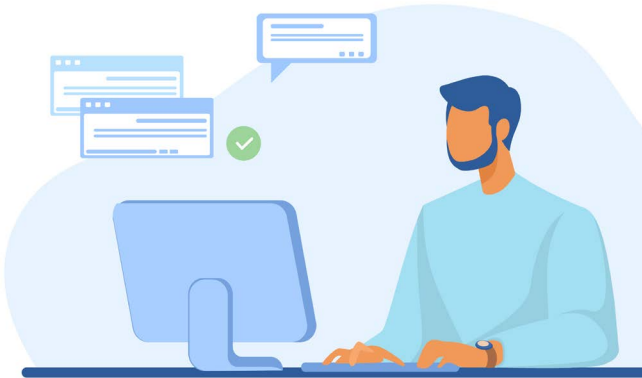
CONTENTS

DRIVER INITIALIZATION

```
//ChromeDriver initialization
using OpenQA.Selenium.Chrome;
IWebDriver driver = new ChromeDriver();
// Firefox initialization
using OpenQA.Selenium.Firefox;
IWebDriver driver = new FirefoxDriver();
// Internet Explorer initialization
using OpenQA.Selenium.IE;
IWebDriver driver = new InternetExplorerDriver();
// Edge initialization
using OpenQA.Selenium.Edge;
IWebDriver driver = new EdgeDriver();
// Safari initialization
using OpenQA.Selenium.Safari;
IWebDriver driver = new SafariDriver();
```

BROWSER NAVIGATION

```
// Open page URL
driver.Navigate().GoToUrl("https://www.ultimateqa.com/");
// Navigation history
driver.Navigate().Forward();
driver.Navigate().Back();
driver.Navigate().Refresh();
```
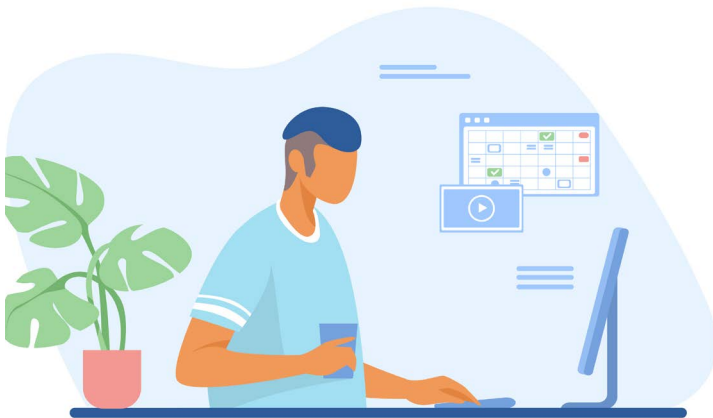
WEB PAGE OPERATIONS

```
// Get the title of the open page
string pageTitle = driver.Title;
// Get the URL of the open page
string url = driver.Url;
// Get the source HTML of the open page
string source = driver.PageSource;
```

WINDOWS OPERATIONS

```
// Navigating between windows/tabs
string currentWindow =driver.
CurrentWindowHandle;
driver.SwitchTo().Window("window handle");
string firstTab = driver.WindowHandles.First();
string lastTab = driver.WindowHandles.Last();
// Close current window
driver.Close();
// Close all windows
driver.Quit();
// Change window size
driver.Manage().Window.Maximize();
driver.Manage().Window.Minimize();  // only
in Selenium 4 and above
driver.Manage().Window.FullScreen();
// Get window size
int width = driver.Manage().Window.Size.
Width;
int height = driver.Manage().Window.Size.
Height;
```

ELEMENT LOCALIZATION

```
// Find elements by different locators
 IWebElement element = driver.
FindElement(By.ClassName("className"));
 IWebElement element = driver.
FindElement(By.CssSelector("css"));
 IWebElement element = driver.
FindElement(By.Id("id"));
 IWebElement element = driver.
FindElement(By.LinkText("text"));
 IWebElement element = driver.
FindElement(By.Name("name"));
 IWebElement element
= driver.FindElement(By.
PartialLinkText("partialText"));
 IWebElement element = driver.
FindElement(By.TagName("input"));
 IWebElement element = driver.
FindElement(By.XPath("//*[@id=id]"));
// Find multiple elements with the same
locator
 IWebElement element = driver.
FindElements(By.ClassName("className"));
// Find an element inside another element
 IWebElement element driver.
FindElement(By.TagName("div")).
FindElement(By.TagName("p"));
SelectElement select = new
SelectElement(element);
// Find a drop-down element
IWebElement element = _driver.
FindElement(By.Id("Country"));
SelectElement dropDown = new
SelectElement(element);
```

ELEMENT OPERATIONS

```
// Basic element interactions
element.Click();
element.Clear();
element.Submit();
element.SendKeys();
// Check element states
bool isDisplayed = element.Displayed;
bool isEnabled = element.Enabled;
bool isSelected = element.Selected;
// Get element's text / tag / attribute / Css value
string text = element.Text;
string tag =element.TagName;
string attribute = element.
GetAttribute("custom-attribute");
string cssValue = element.
GetCssValue("color");
// Interact with drop-down options
dropDown.SelectByIndex(1);
dropDown.SelectByText("United Kingdom");
dropDown.SelectByValue("UK");
dropDown.DeselectByIndex(1);
dropDown.DeselectByText("United
Kingdom");
dropDown.DeselectByValue("UK");
dropDown.DeselectAll();
```
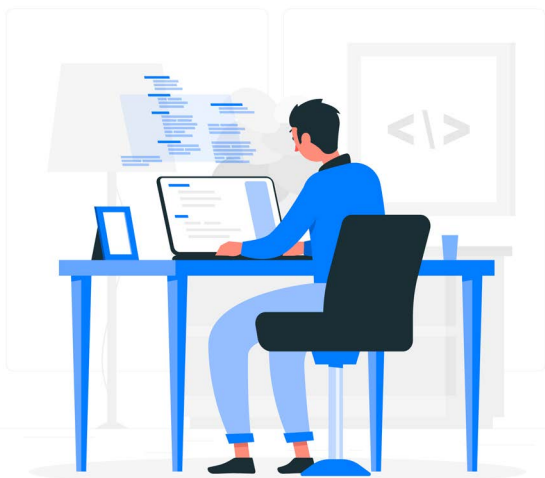
FRAMES

```
// Switch between frames
driver.SwitchTo().Frame(1);
driver.SwitchTo().Frame("name");
driver.SwitchTo().Frame(element);
driver.SwitchTo().DefaultContent();
```

ALERTS

```
// Handle JavaScript alerts
IAlert alert = driver.SwitchTo().Alert();
alert.Accept();
alert.Dismiss();
alert.SendKeys("my text");
```

WAITS

```
// Implicit wait
driver.Manage().Timeouts().ImplicitWait =
TimeSpan.FromSeconds(10);
// Explicit wait
 WebDriverWait wait = new
WebDriverWait(driver, TimeSpan.
FromSeconds(10));
IWebElement element = wait.Until(e =>
e.FindElement(By.Id("MyElement")));
```

COOKIES

```
// Add a cookie
Cookie cookie = new OpenQA.Selenium.
Cookie("key", "value");
driver.Manage().Cookies.AddCookie(cookie);
// Get all cookies
var cookies = driver.Manage().Cookies.
AllCookies;
// Delete a cookie by name
driver.Manage().Cookies.
DeleteCookieNamed("CookieName");
// Delete all cookies
driver.Manage().Cookies.DeleteAllCookies();
```

SCREENSHOTS

```
// Take a screenshot of an element
var elementScreenshot = (webElement as
ITakesScreenshot).GetScreenshot();
elementScreenshot.SaveAsFile("screenshot_
of_element.png");
// Take a full-screen screenshot
Screenshot screenshot = ((ITakesScreenshot)
driver).GetScreenshot();
screenshot.SaveAsFile(@"file Path",
ImageFormat.Png);
```

ACTIONS

```
// Key down - keep a key pressed
Actions actionProvider = new Actions(driver);
IAction keydown = actionProvider.
KeyDown(Keys.Control).SendKeys("a").Build();
keydown.Perform();
// Key up - release pressed key
Actions actionProvider = new Actions(driver);
action.KeyDown(Keys.Shift).SendKeys(search,
"qwerty").KeyUp(Keys.Shift).
SendKeys("qwerty").Perform();
// Drag and drop an element
IWebElement element = driver.
FindElement(By.Id("MyElement"));
Actions move = new Actions(driver);
move.DragAndDropToOffset(element, 30,
0).Perform();
// Upload a file
IWebElement element = driver.
FindElement(By.Id("UploadFile"));
element.SendKeys(filePath);
```