Selenium WebDriver Java Cheat Sheet

Initialize

Chrome driver
import org.openqa.selenium.chrome.ChromeDriver;
System.*setProperty*(**"webdriver.chrome.driver"**,**"C//…//chromedriver.exe"**);
WebDriver driver = **new** ChromeDriver();
FireFox driver
import org.openqa.selenium.firefox.FirefoxDriver;
System.*setProperty*(**"webdriver.gecko.driver"**,**"C://...//geckodriver.exe"**);
WebDriver driver = **new** FirefoxDriver();
Internet Explorer driver
import org.openqa.selenium.ie.InternetExplorerDriver;
System.*setProperty*(**"webdriver.ie.driver"**, **"C://…//IEDriverServer.exe"**);
WebDriver driver = **new** InternetExplorerDriver();
Microsoft Edge driver
import org.openqa.selenium.edge.EdgeDriver;
System.*setProperty*(**"webdriver.edge.driver"**, **"C://…//MicrosoftWebDriver.exe"**);
WebDriver driver = **new** EdgeDriver();

Locators

Find an element
driver.findElement(By.*id*(**"id"**));
driver.findElement(By.*name*(**"name"**));
driver.findElement(By.*tagName*(**"input"**));
driver.findElement(By.*className*(**"className"**));
driver.findElement(By.*cssSelector*(**"css"**));
driver.findElement(By.*linkText*(**"text"**));
driver.findElement(By.*partialLinkText*(**"pText"**));
driver.findElement(By.*xpath*(**"//*[@id='editor']"**));
Find element inside another element
WebElement div = driver.findElement(By.*tagName*(**"div"**)).findElement(By.*tagName*(**"a"**));
Get a list of all elements using any locator
List<WebElement> anchors = driver.findElements(By.*tagName*(**"a"**));

Basic Elements Operations

Interact with element
`WebElement element = driver.findElement(By.id("id"));`
`element.click();`
`element.clear();`
`element.submit();`
`String innerText = element.getText();`
`boolean isEnabled = element.isEnabled();`
`boolean isDisplayed = element.isDisplayed();`
`boolean iSselected = element.isSelected();`
Select element
`Select select = new Select(element);`
`select.selectByIndex(1);`
`select.selectByVisibleText("Ford");`
`select.selectByValue("ford");`
Deselect elements
`select.deselectAll();`
`select.deselectByIndex(1);`
`select.deselectByVisibleText("Ford");`
`select.deselectByValue("ford");`
`WebElement selectedOption = select.getFirstSelectedOption();`
`List<WebElement> allselected = select.getAllSelectedOptions();`
`boolean isMultipleselect = select.isMultiple();`

Advanced Elements Operations

Drag And Drop
`//Element to a specific location`
`Actions move = new Actions(driver);` `move.dragAndDropBy(element, 30, 0).perform();`
`//Element to a element`
`move.dragAndDrop(element,secondElement);`
Upload a file - First make sure that the input element is **visible**
`driver.findElement(By.id("myUploadElement")).sendKeys("<absolutePathToMyFile>");`
Scroll
`// scroll to specific element`

`WebElement elementToBeScrolledTo = driver.findElement(By.id("id_of_element"));`
`((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView(true);",`
`elementToBeScrolledTo);`
`Thread.sleep(500);`

`// scroll to a position`
`JavascriptExecutor jse = (JavascriptExecutor)driver;` `jse.executeScript("window.scrollBy(0,250)", "");`
`// get position`
`JavascriptExecutor executor = (JavascriptExecutor) driver;` `Long value = (Long) executor.executeScript("return window.pageYOffset;");`

Basic Browser Operation

```java
// Navigate to a page
driver.navigate().to("http://google.com");

// Get the title of the page
String title = driver.getTitle();

// Get the current URL
String url = driver.getCurrentUrl();

// Get the current page HTML source
String html = driver.getPageSource();
```

Advanced Browser Operation

```java
// Insert JavaScript popups
Alert a = driver.switchTo().alert();
a.accept();
a.dismiss();

// Switch between browser windows or tabs
Set<String> windowHandles = driver.getWindowHandles();
String firstTab = windowHandles.iterator().next();
driver.switchTo().window(firstTab);

// Navigation history
driver.navigate().back();
driver.navigate().refresh();
driver.navigate().forward();

// Maximize window
driver.manage().window().maximize();

// Add a new cookie
Cookie cookie = new Cookie("key", "value");
driver.manage().addCookie(cookie);

// Get all cookies
Set<Cookie> cookies = driver.manage().getCookies();

// Delete a cookie by name
driver.manage().deleteCookie(cookie);

// Delete all cookies
driver.manage().deleteAllCookies();

// Switch to frames
driver.switchTo().frame(1);
driver.switchTo().frame("frameName");
WebElement element = driver.findElement(By.id("id"));
driver.switchTo().frame(element);

// Switch to the default document
driver.switchTo().defaultContent();

// Wait until a page is fully loaded via JavaScript
void waitForLoad(WebDriver driver) {
    new WebDriverWait(driver, 30).until((ExpectedCondition<Boolean>) wd ->
            ((JavascriptExecutor) wd).executeScript("return
document.readyState").equals("complete"));
}
```