

SELENIUM WEBDRIVER METHODS WITH THEIR RETURN TYPES

Browser & Page Methods

| Method | Return Type | Description |
|---------------------------|-------------|---|
| getTitle() | String | Returns the title of the current page. |
| getCurrentUrl() | String | Returns the URL of the current page. |
| getPageSource() | String | Returns the HTML source code of the page. |
| navigate().to(String url) | void | Opens the specified URL. |
| navigate().back() | void | Navigates back to the previous page. |
| navigate().forward() | void | Moves forward in browser history. |
| navigate().refresh() | void | Refreshes the current page. |

Finding Elements Methods

| Method | Return Type | Description |
|--------------------------|------------------|---|
| findElement(By locator) | WebElement | Finds a single element matching the locator. |
| findElements(By locator) | List<WebElement> | Finds multiple elements matching the locator. |

Handling Windows & Frames

| Method | Return Type | Description |
|---|-------------|---|
| getWindowHandle() | String | Returns the current window handle. |
| getWindowHandles() | Set<String> | Returns all open window handles. |
| switchTo().window(String handle) | WebDriver | Switches to another window. |
| switchTo().frame(int index) | WebDriver | Switches to a frame by index. |
| switchTo().frame(String nameOrId) | WebDriver | Switches to a frame by name or ID. |
| switchTo().frame(WebElement frameElement) | WebDriver | Switches to a frame using a WebElement. |
| switchTo().defaultContent() | WebDriver | Switches back to the main page. |

Handling Alerts & Popups

| Method | Return Type | Description |
|-----------------------------|-------------|-------------------------------|
| switchTo().alert() | Alert | Switches focus to an alert. |
| alert.accept() | void | Clicks "OK" on the alert. |
| alert.dismiss() | void | Clicks "Cancel" on the alert. |
| alert.getText() | String | Gets the alert message. |
| alert.sendKeys(String text) | void | Enters text into the alert. |

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WebElement Methods

| Method | Return Type | Description |
|----------------------------------|-------------|---|
| click() | void | Clicks the element. |
| sendKeys(String text) | void | Types text into the element. |
| clear() | void | Clears the text field. |
| getText() | String | Gets the text of the element. |
| getAttribute(String name) | String | Gets an attribute value. |
| getCssValue(String propertyName) | String | Gets the CSS property value. |
| isDisplayed() | boolean | Checks if the element is visible. |
| isEnabled() | boolean | Checks if the element is enabled. |
| isSelected() | boolean | Checks if the element is selected (radio button, checkbox). |
| getSize() | Dimension | Gets the height and width of an element. |
| getLocation() | Point | Gets the x and y coordinates of an element. |
| submit() | void | Submits a form element. |

Browser Window Management

| Method | Return Type | Description |
|---|-------------|--|
| manage().window().maximize() | void | Maximizes the browser window. |
| manage().window().minimize() | void | Minimizes the browser window. |
| manage().window().fullscreen() | void | Opens the browser in full-screen mode. |
| manage().window().getSize() | Dimension | Gets the window size. |
| manage().window().getPosition() | Point | Gets the window position. |
| manage().window().setSize(Dimension size) | void | Sets the window size. |
| manage().window().setPosition(Point position) | void | Sets the window position. |

JavaScript Execution in Selenium

| Method | Return Type | Description |
|-----------------------------------|-------------|--|
| executeScript(String script) | Object | Executes JavaScript code. |
| executeAsyncScript(String script) | Object | Executes asynchronous JavaScript code. |

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Wait Methods in Selenium

| Method | Return Type | Description |
|--|-----------------------|---------------------------------|
| implicitlyWait(long time, TimeUnit unit) | void | Sets implicit wait time. |
| explicitWait.until(ExpectedConditions.condition) | WebElement | Waits for a specific condition. |
| fluentWait.withTimeout(Duration.ofSeconds(10)) | FluentWait<WebDriver> | Waits with polling intervals. |

Mouse & Keyboard Actions

| Method | Return Type | Description |
|---|-------------|-------------------------------|
| moveToElement(WebElement target) | Actions | Moves mouse to an element. |
| doubleClick(WebElement target) | Actions | Performs a double-click. |
| contextClick(WebElement target) | Actions | Right-clicks on an element. |
| dragAndDrop (WebElement source, WebElement target) | Actions | Drags and drops an element. |
| sendKeys(Keys key) | Actions | Simulates keyboard key press. |

Handling Dropdowns (Select Class)

If you are working with `<select>` dropdowns, Selenium provides a Select class:

| Method | Return Type | Description |
|--------------------------------------|------------------|---|
| selectByVisibleText (String text) | void | Selects an option by visible text. |
| selectByValue(String value) | void | Selects an option by its value attribute. |
| selectByIndex(int index) | void | Selects an option by index (starting from 0). |
| getOptions() | List<WebElement> | Gets all options inside a dropdown. |
| getFirstSelectedOption() | WebElement | Gets the first selected option. |

Working with iFrames

If a webpage has **iFrames**, Selenium needs to switch focus before interacting:

| Method | Return Type | Description |
|-----------------------------------|-------------|------------------------------------|
| switchTo().frame(int index) | void | Switches to a frame by index. |
| switchTo().frame(String nameOrId) | void | Switches to a frame by name or ID. |
| switchTo().defaultContent() | void | Switches back to the main page. |