

## Common Operation on Web Elements

1. `click()`  
This is used to click on links, image, button, radioButton, checkbox etc
2. `clear()`  
This is used for clearing an input field if there is already some data
3. `sendKeys()`  
This is used for entering text into input fields
4. `getLocation().x`  
This is used to capture the x co-ordinate of an element
5. `getLocation().y`  
This is used to capture the y co-ordinate of an element
6. `getAttribute()`  
This is used to capture the value for a particular property
7. `getTagName()`  
This is used to capture the html tag of an element
8. `getSize()`  
This captures the size of a WebElement
9. `getText()`  
This capture the text of any WebElement as it is displayed on the Web Application
10. `isDisplayed()`  
This will tell us whether the element is visible or hidden
11. `isEnabled()`  
This tell us whether a particular Element is Enabled or Disabled
12. `isSelected()`  
This is used to check if a radio button is selected if a check box is checked or and option from dropDown is selected.

## Locators in WebDriver

### 1. Id()

This is the fastest locator for Selenium and it is generally Unique

```
driver.findElement(By.id())
```

### 2.name()

This can also be used to identify an element but multiple elements can have the same name property

When two or more elements have the same property WebDriver always works on the first element with that property

```
Driver.findElement(By.name())
```

### 3. ClassName()

Class is used to apply CSS to elements.

Multiple elements can have the same class property

```
Driver.findElement(By.className())
```

### 4.linkText()

### 5.partialLinkText()

The above two locators can be used only on links

When we give the complete link name we can use linkText. When we give a portion of link name then we can go with partialLinkText

```
Driver.findElement(By.linkText())
```

```
Driver.findElement(By.partialLinkText())
```

### 6. Xpath()

Xpath represents the address of the element and it is always unique

Xpath is of 2 types

- a) Relative
- b) Absolute

Relative xpath always starts with //

Absolute xpath always starts with html

Note : Though xpath can identify the elements uniquely its slows down the speed of the Program

```
Driver.findElement(By.xpath())
```

7. cssSelector()

Css is used for applying colors and fonts to the elements in the web Application

This is also a very fast locator – Id

Css is also of 2 types

- a) Relative
- b) Absolute

```
Driver.findElement(By.cssSelector())
```

8. tagName()

This represents html tag of the elements and is generally used when we want to capture multiple elements from the Web Application

```
Driver.findElemtn(By.tagName())
```

## Methods in WebDriver

WebDriver uses methods for performing various operations on WebElements

1) get

This is used for navigating through a URL  
`driver.get("URL address");`

2) navigate()

This is used to navigate to a URL  
`driver.navigate().to("URL address");`

using navigate it is possible to click the backward and forward buttons of the Browser

```
driver.navigate().Back();  
driver.navigate().Forward();  
driver.navigate().Refresh();
```

3) getTitle()

This is used to capture the title of the currently opened page  
`driver.getTitle();`

4) getCurrentUrl()

This is used to get/capture the url of the currently opened page  
`driver.getCurrentUrl();`

5) getPageSource()

This is used to capture the html code of the page opened by the WebDriver  
`driver.getPageSource();`

6) findElement()

This is used to identify an element on the Web Application. This identification can be done based on any of the previously discussed locators  
`driver.findElement(By.locator());`

7) findElements()

This is used when we want to capture multiple elements from the Web Application. This can also use all the locators  
`driver.findElements(By.locator());`

8) close()

This will close the browser on which the control of webDriver is present  
`driver.close();`

9) quit()

When multiple/tabs are opened by webDriver and if we want to close all of them we can use this method.  
`driver.quit();`

10) getWindowHandle()

Whenever WebDriver launches a browser it assigns a unique Id to the browser which is called WindowHandler  
This id can be captured using the following method.  
`driver.getWindowHandle()`

11) getWindowHandles()

When multiple browsers/tabs are opened by WebDriver and we want to capture all the ID's. we can use this method  
`driver.getWindowHandles()`

12) SwitchTo()

This is used to switch from one window to another window (or) Window to frame (or) to switch to the default homePage  
`driver.switchTo().window()`  
`driver.switchTo().Frame()`  
`driver.switchTo().Alert()`  
`driver.switchTo().defaultContent()`

13) `manage()`

This is used to perform various activities like Maximize the size of window, setting implicit waits, capture the information of cookies etc  
`driver.manage()`

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