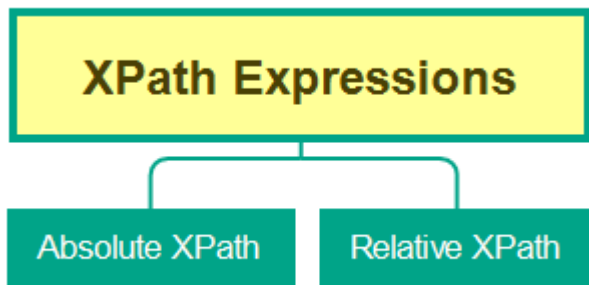## XPath Expressions

Out of all the locators, XPath Expressions are the powerful locators and can be able to locate any type of UI element.

Types of XPath Expressions:

XPath expressions can be classified into the below two types:

Installing Firepath to generate XPath

- Firepath is one of the Firefox Add-ons / Extensions which can only be installed on Firefox Browser.
- Firepath needs to be installed after installing FireBug
- In Firefox browser, Google Search 'FirePath' , check for its compatibility with Firefox version and Install FirePath
- Open Firebug in Firefox browser and find the XPath Expression for 'Sing In' option on https://www.msn.com using Firepath
- With the help of Selenium IDE, locate the 'Sign In' UI element using the Firepath generated XPath Expression.

Absolute XPath

Using XPath Expressions, we can navigate through the HTML code and locate the desired element.

Absolute XPath tries to locates the element from the root. i.e. complete path.

The below examples will help us in understanding the Absolute XPath Expressions:

Demo site :: http://compendiumdev.co.uk/selenium/basic_web_page.html

- / - locates the entire HTML document
- /html - locates the complete HTML code
- /html/head - locates the head portion of HTML code
- /html/head/title - locates the title portion of head section
- /html/body - locates the body portion of HTML code
- /html/body/p - locates all the p tags in the body portion
- /html/body/p[1] - locates the first p tag
- /html/body/p[2] - locates the second p tag
- All p tags having id 'para1' - /html/body/p[@id='para1']
- All p tags having id 'para2' - /html/body/p[@id='para2']
- All p tags having class 'main' - /html/body/p[@class='main']
- All p tags having class 'sub' - /html/body/p[@class='sub']
- All p tags having id as 'para1' and class as 'main' - /html/body/p[@id='para1'][@class='main']

Using Firepath for generating Absolute XPath

- Open Firebug and select 'Firepath' tab
- In 'Firepath' tab, select **'Generate Absolute XPath' option**
- Inspect 'Button2' button on the www.omayo.blogspot.com

Disadvantages of using Absolute XPath

- Generate Absolute XPath for 'Button2' button on the www.omayo.blogspot.com
- Change the location of the button on the www.omayo.blogspot.com
- Generate Absolute XPath again and compare the Absolute XPaths

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Relative XPath

Unlike Absolute XPath, Relative XPath tries to <u>locate the element directly</u> instead of locating from root.

The below examples will help us in understanding the Relative XPath Expressions:

Demo site :: http://compendiumdev.co.uk/selenium/basic_web_page.html

- Generally Relative XPath Expression starts with '//''
- //html - locates the complete HTML code
- //head - locates the head portion of HTML code directly
- //body - locates the body portion of HTML code directly
- //title - locate the title portion of HTML code directly
- //p - locates all the Paragraphs on the page
- //p[1] - locates the first paragraph
- //p[2] - locates the second paragraph
- //p[@id='para1'] - locates the paragraph having the id attribute value as 'para1'
- //p[@id='para2'] - locates the paragraph having the id attribute value as 'para2'
- //p[@class='main'] - locates the paragraph having the class attribute value as 'main'
- //p[@class='sub'] - locates the paragraph having the class attribute value as 'sub'
- //p[@id='para1'][@class='main'] - locates all the p tags having id as 'para1' and class as 'main'

Using Firepath for generating Relative XPath

- Open Firebug and select 'Firepath' tab
- In 'Firepath' tab, de-select 'Generate Absolute XPath' option
- Inspect 'Button2' button on the www.omayo.blogspot.com
- If you feel that the XPath Expression returned by Firepath is not good, you can use your above knowledge in creating good XPath Expressions on your own.

Advantages of using Relative XPath

- Generate Relative XPath for 'Button2' button on the www.omayo.blogspot.com
- Change the location of the button on the www.omayo.blogspot.com
- Generate Relative XPath again and compare the Relative XPaths

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