XPATH CHEAT SHEET

practicetestautomation.com

TYPES OF XPATH

ABSOLUTE XPATH

/html/body/div/div/section/section/div/div/div/input

RELATIVE XPATH

//*[@id='row1']/input

XPATH FORMULA

//tag[@attribute='value']

Example:

//div[@class='round-button']

SYNTAX	EXPLAINATION
/	Absolute XPATH - Starts at the top of the DOM, or a direct decendant (child)
//	Relative XPATH - Looks anywhere on the page. Starts at any element on the page with this tag, or an indirect decendant
div	Example of an element tag
[]	Predicates - Used to find a specific node or a node with a specific value
@	Attribute
="	Specific attribute value to search for
.	Uses the node that is in context
..	Selects the parent of the current node

/ VS //

/ - short for child node
// - short for descendant or self node

At the beginning of xpath
/ - selects a root element
// - selects element anywhere on the page

In the middle of xpath
/ - selects child of the element
// - selects descendant of the element

// VS .//

Dot introduces a relative location path, starting at the context node.

Examples:
WebElement parentElement = driver.findElement(By.id("someId"));

By childLocator1 = By.xpath("//input");
parentElement.findElement(childLocator1);

This will ignore parentElement and will search for input element anywhere on the page

By childLocator2 = By.xpath(".//input");
parentElement.findElement(childLocator2);

This will search input element that is descendant of the parentElement

XPATH AXES

Formula:
axisname::nodetag[predicate]

XPath axes:

ancestor::	Selects all ancestors of the current nodes
descendant::	Selects all children, grand-children etc... of the current node
parent::	Only the parent of the current node
following-sibling::	Siblings after the current node
preceding-sibling::	Siblings before the current node

Examples:
//button[@id='btn']/parent::div - Find div parent of button element with id "btn"
//button[@id='btn']/following-sibling::label - Find label sibling that is located after button element with id "btn"
//button[@id='btn']/preceding-sibling::label - Find label sibling that is located before button element with id "btn"
//button[@id='btn']/parent::div/following-sibling::div/div - Combination of few axes in the same expression

INDEX

//tag[index]
//h5[2] - Get second element with tag h5

//tag1[index1]/tag2[index2]
(//div[@class='row'])[3]/h5[2] - Find third div element that has class row, and then get second h5 direct child

(//tag1[@attribute='value']/tag2)[index]
(//div[@class='row']/input[@class='text'])[2] - Get all input elements with class text that are children of any div elements with class row, and then get second element from that list

POSITION FUNCTIONS

position()=2 works the same way as index [2]
//h5[position()=2] same as //h5[2]

Operators that we can use with position

position()=2	Equal
position()!=2	Not equal
position()>2	Greater than
position()>=2	Greater than or equal to
position()<2	Less than
position()<=2	Less than or equal to

last() - get last element from the list
//h5[last()]

We can also use subtraction with the last function
//h5[last()-1]

XPATH OPERATORS

Using 'OR'
//button[@name='Add' or @name='Remove']

Using 'AND'
//button[@id and @class='btn 'and @style and @name='Add']
//button[@id][@class='btn'][@style][@name='Add']

XPATH WILDCARDS

//*[@class] - Element with any tag that has 'class' attribute
//button[@*='btn'] - Any button element where any attribute has value 'btn' //div[@*] - Div element that has any attribute

FUNCTIONS

Text Function

Full element text
//div[text()='Full element text']

Contains Function

Works with attribute values

//button[contains(@id,'username')]

And with text
Lets learn how to automate tests
//div[contains(text(),'how to automate')]

Starts-With Function

Works with attribute values
<input class="input-field">
//input[starts-with(@class,'input')]

And with text
This page is created to be able to reproduce the most common Selenium Exceptions.
//p[starts-with(text(),'This page is created')]")

not Function

//div[not(@id='login')]
//a[not(text()='Click here')]
//input[not(contains(@class,'input'))]
//p[not(starts-with(text(),'Selenium')]

FINDING ELEMENTS RELATIVE TO OTHER ELEMENTS

//div[./input] - Find div element that has input child
//input[parent::div[@id='row2']] - same as div[@id='row2']/input - The same as div[@id='row2']/input

SELECTING SEVERAL PATHS

Use the vertical bar to combine two or more XPath expressions into one
//div[@id='row1']/button | //div[@id='row1']/input
//h2 | //h5 | //p

SVG ELEMENTS

To get to SVG element, use wildcard in place of tag name, and use name function for the SVG element tag
//*[name()='svg']//*[name()='rect' and @transform]
//*[name()='rect' and contains(@transform,'rotate(45.0')]