

August 23, 2019

XPath Selectors

Session 2.3

Presented by

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Agenda

- Xpath Selectors

Important Locators

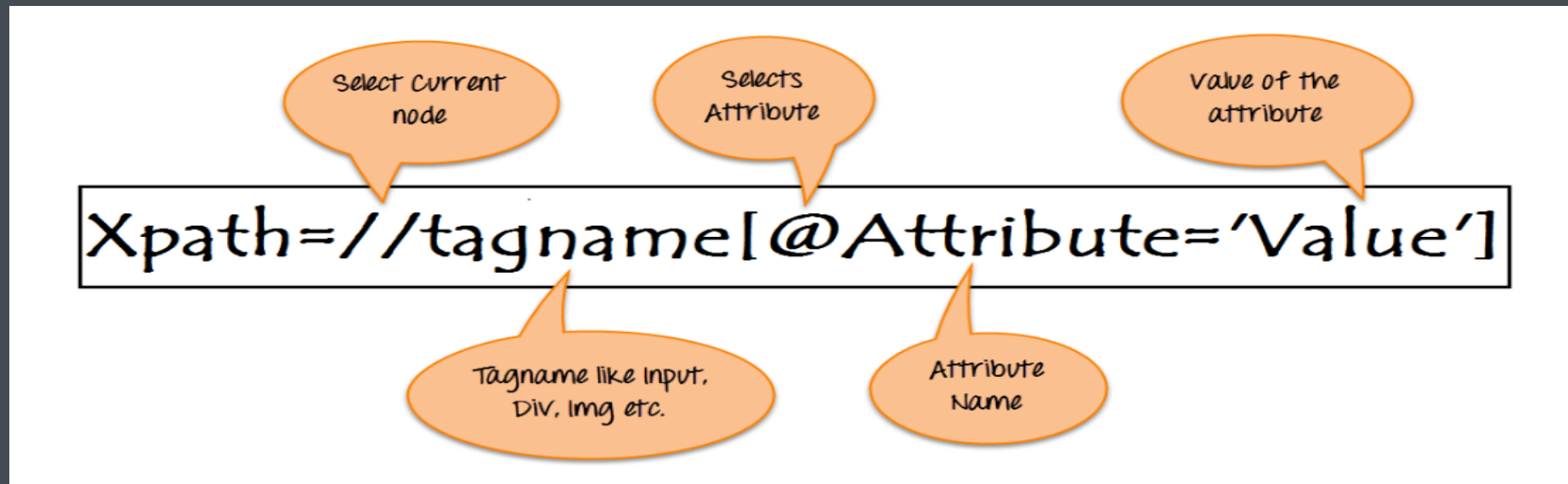
You can find elements using their tags or attributes and values using the following selenium locators:

- ID
- Class
- TagName
- Name
- CSS
- XPath

What is Xpath?

When an HTML document is loaded into a web browser, it becomes a document object. You can query for elements within the document object directly from within your browser's console window by performing the following document object methods.

- One of the locators used to navigate through elements and attributes.
- A syntax or language for finding any element from the HTML DOM using an XML path expression.



Absolute Versus Relative

XPath required for finding the dynamic element and traverse between various elements of the web page

```
Xpath=//tagname[@attribute='value']
```

//	Selects current node
Tagname	Tagname of the particular node
@	Select an attribute
Attribute	Attribute name of the node
Value	Value of the attribute

➤ Absolute XPath

```
html/body/div[1]/section/div[1]/div/div/div/div[1]/div/div/div/div/div[3]/div[1]/div/h4[1]/b
```

➤ Relative XPath

```
Relative xpath: //*[@class='featured-box']//*[text()='Testing']
```

- Lets start identifying elements using XPath on this Demo site

<http://demo.guru99.com/v1/>

Using Attributes

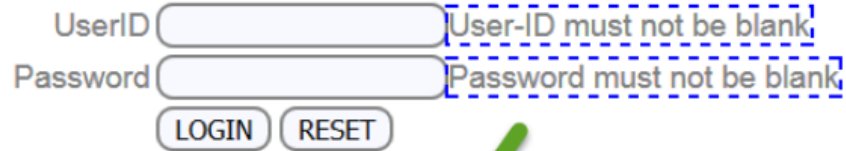
```
Xpath=//input[@type='text']  
Xpath= //label[@id='message23']  
Xpath= //input[@value='RESET']  
Xpath=//*[@class='barone']  
Xpath=//a[@href='http://demo.guru99.com/']  
Xpath= //img[@src='//cdn.guru99.com/images/home/java.png']
```

```
Xpath=//input[@name='uid']
```

The image shows a web form with fields for 'UserID' and 'Password', and 'LOGIN' and 'RESET' buttons. A dashed blue box highlights the 'UserID' input field, with a callout bubble labeled 'Element' pointing to it. Below the form is the FirePath DOM viewer. The 'XPath' field is set to `./input[@name='uid']`, which is highlighted with a red box and a callout bubble labeled 'Basic xpath'. The DOM tree shows the corresponding HTML element: `<input type="text" onblur="validateuserid();" onkeyup="validateuserid();" maxlength="10" name="uid"/>`. At the bottom left, a red box indicates '1 matching node'.

Xpath Contains()

Xpath=//*[contains(@id,'message')]



FirePath tool showing the XPath query: `//*[contains(@id,'message')]`. The query is highlighted in red. The DOM tree shows two nodes matching the query, highlighted in blue:

```
<label id="message23" style="visibility: visible;">User-ID must not be blank</label>
<label id="message18" style="visibility: visible;">Password must not be blank</label>
```

Two green arrows point from the text '2 Nodes Matched' to the two highlighted nodes. A red box at the bottom left contains the text '2 matching nodes'.

Xpath=//*[contains(@name,'btn')]



FirePath tool showing the XPath query: `//*[contains(@name,'btn')]`. The query is highlighted in red. The DOM tree shows two nodes matching the query, highlighted in blue:

```
<input type="submit" value="LOGIN" name="btnLogin"/>
<input type="reset" value="RESET" name="btnReset"/>
```

A speech bubble with the text '2 Nodes Matched' points to the two highlighted nodes. A red box at the bottom left contains the text '2 matching nodes'.

Using OR & AND

Xpath=//*[@type='submit' or @name='btnReset']

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UserID(*)

Password(*)

* mandatory field

Elements Console Sources Network Performance Memory Application Security Audits

```
<br>
<form name="frmLogin" method="POST" action="index.php">
  <table border="0" width="50%" align="center">
    <!-- Display User ID label and its text box-->
    <td>
      <input type="submit" name="btnLogin" value="LOGIN">
      <input type="reset" name="btnReset" value="RESET">
    </td>
  </table>
</form>
```

tmnl.gr_demo_guru99.com body

//*[@type='submit' or @name='btnReset'] 1 of 2 Cancel

Xpath=//input[@type='submit' and @name='btnLogin']

UserID

Password

Top Window Highlight XPath: //input[@type='submit' AND @name='btnLogin']

```
<tr>
  <td>
    <input type="submit" value="LOGIN" name="btnLogin"/>
    <input type="reset" value="RESET" name="btnReset"/>
  </td>
</tr>
</tbody>
```

1 matching node

Starts With()

Xpath=//label[starts-with(@id,'message')]

UserID User-ID must not be blank
Password Password must not be blank

FirePath

Top Window Highlight XPath: //label[starts-with(@id,'message')]

Id starting with 'message'

```
<tr>
  <td align="right">UserID</td>
  <td>
    <input type="text" onblur="validateuserid();" onkeyup="validateuserid();" maxlength="10" name="uid"/>
    <label id="message23" style="visibility: visible;">User-ID must not be blank</label>
  </td>
</tr>
<!-- Display Password and its text box-->
<tr>
  <td align="right">Password</td>
  <td>
    <input type="password" onblur="validatepassword();" onkeyup="validatepassword();" name="password"/>
    <label id="message18" style="visibility: visible;">Password must not be blank</label>
  </td>
</tr>
```

2 matching nodes

Text()

Xpath=//td[text()='UserID']

The screenshot displays a web application with a login form. The form contains two text input fields, one labeled 'UserID' and one labeled 'Password', followed by 'LOGIN' and 'RESET' buttons. A blue dashed box highlights the 'UserID' label and its input field. A large green arrow points from this box down to the FirePath tool interface.

The FirePath tool interface is shown at the bottom. It has a tabbed menu with 'Console', 'HTML', 'CSS', 'Script', 'DOM', 'Net', 'Cookies', and 'FirePath'. The 'FirePath' tab is active. Below the tabs, there is a 'Top Window' dropdown, a 'Highlight' button, and an 'XPath:' input field containing the XPath expression `./td[text()='UserID']`. Below the input field, the HTML structure of the page is displayed. The following XML snippet is visible:

```
<table width="50%" border="0" align="center" style="margin-top: 270px">
  <!-- Display User ID label and its text box-->
  <tbody>
    <tr>
      <td align="right">UserID</td>
      <td>
        <input type="text"/>
      </td>
    </tr>
    <!-- Display Password and its text box-->
    <tr>
      <td align="right">Password</td>
      <td>
        <input type="password"/>
      </td>
    </tr>
  </tbody>
</table>
```

At the bottom left of the FirePath interface, a red box highlights the text '1 matching node'.

These are methods that are used to find the most complex or dynamic elements:

- Following
- Ancestor
- Child
- Preceding
- Following-Sibling
- Parent
- Self
- Descendent

Read More [Here](#)

Following

Xpath=//*[@type='text']//following::input

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Showing
3 Nodes

UserID

Password

Xpath using
following

```
<tr>
  <!-- Display Password and its text box-->
</tr>
```

Xpath=//*[@type='text']//following::input[1]

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Showing
particular Node

UserID

Password

Top Window ▾ Highlight XPath: ▾ `//*[@type='text']//following::input[1]`

```
<tr>
  <!-- Display Password and its text box-->
  <tr>
    <td align="right">Password</td>
    <td>
      <input type="password" onblur="validatepassword();" onkeyup="validatepassword();" />
      <label id="message18"/>
    </td>
  </tr>
```

Ancestors

```
Xpath=//*[text()='Enterprise Testing']//ancestor::div
```

Tutorials Library

TESTING	SAP	LIVE PROJECTS	MUST LEARN!
Learn Software Testing	Learn SAP Beginner	Live Testing Project	Learn Excel Tutorials
QTP (Quick Test Professional)	Learn SAP ABAP	Live Selenium Project	Learn Accounting
Learn Selenium	Learn SAP E	Live Ecommerce Project	Learn Ethical Hacking
Learn Mobile App Testing	Learn SAP F	Live UFT Testing	Cloud Computing for Beginners
Learn Cucumber Testing	Learn SAP G	Live HP ALM Exercise	Learn Photoshop CC
Learn SoapUI	Learn SAP SD	Live Mobile Testing	Learn BigData
Learn Agile Testing	Learn SAP CRM	Live Security Testing	Learn Digital Marketing

FirePath XPath: `//*[text()='Enterprise Testing']//ancestor::div`

```
Xpath=//*[text()='Enterprise Testing']//ancestor::div[1]
```

Child

```
Xpath=//*[@id='java_technologies']/child::li
```

The screenshot displays a web application menu with five categories: TESTING, TEST MANAGEMENT, SAP, LIVE PROJECTS, and MUST LEARN!. Each category contains a list of learning topics. The FirePath tool is open, showing the XPath `//*[@id='java_technologies']/child::li` and the DOM tree structure. A speech bubble indicates "xpath using child".

TESTING	SAP	LIVE PROJECTS	MUST LEARN!
Learn Software Testing	Learn SAP Beginner	Live Testing Project	Learn Excel Tutorials
QTP (Quick Test Professional)	Learn SAP ABAP	Live Selenium Project	Learn Accounting
Learn Selenium	Learn SAP HR/HCM	Live Ecommerce Project	Learn Ethical Hacking
Learn Mobile App Testing	Learn SAP FICO	Live UFT Testing	Cloud Computing for Beginners
Learn Cucumber Testing	Learn SAP Basis	Live IIP ALM Exercise	Learn Photoshop CC
Learn SoapUI	Learn SAP SD	Live Mobile Testing	Learn BigData
Learn Agile Testing	Learn SAP CRM	Live Security Testing	Learn Digital Marketing
	Learn SAP MM	Live PHP Project	Learn Business Analyst
	Learn SAP CO	Live Scrum(Agile) Testing	Learn Informatica
	Learn SAP Payroll	Live Insurance Testing	Learn Project Management

FirePath tool shows the XPath `//*[@id='java_technologies']/child::li` and the DOM tree structure. A speech bubble indicates "xpath using child".

71 matching nodes

```
Xpath=//*[@id='java_technologies']/child::li[1]
```


Following-Sibling

```
xpath=//*[@type='submit']//following-sibling::input
```

xpath using
following-
sibling

UserID

Password

1 Nodes
matched

Top Window ▾ Highlight XPath: ▾ `//*[@type='submit']//following-sibling::input`

```
<tr>
  <tr>
    <td/>
    <td>
      <input type="submit" value="LOGIN" name="btnLogin"/>
      <input type="reset" value="RESET" name="btnReset"/>
    </td>
  </tr>
</tbody>
</table>
</form>
```

1 matching node

Parent

Xpath=//*[@id='rt-feature']/parent::div

The screenshot displays a web browser window with a course selection interface. The interface has a header "A few of our most popular courses" and a grid of six course cards: SELENIUM, JAVA, QTP, SAP Beginners, Linux, and Test Management. Each card features an icon and the course name. A blue dashed box highlights the entire grid area. Below the browser window, the FirePath extension's DOM tree is visible. The XPath expression `//*[@id='rt-feature']/parent::div` is entered in the search bar. The results show a tree structure where the `<div id="rt-feature">` node is highlighted in blue. A red box around the search bar and the DOM tree indicates that 65 matching nodes were found. Two orange callout bubbles provide additional context: one says "xpath using parent" and the other says "65 Nodes matched".

A few of our most popular courses

SELENIUM JAVA QTP SAP Beginners Linux Test Management

FirePath

Top Window Highlight XPath: `//*[@id='rt-feature']/parent::div`

65 matching nodes

xpath using parent

65 Nodes matched

Homework

- Site offers a way to test online booking for hotel, flight, tours, and travel
- Using the site below, create a test that will perform a search on booking a hotel and then validate that results are found.
- Use XPath

<https://www.phptravels.net/>

Up Coming Topics:

- Checking for Element Properties
- Synchronizing Your Tests
- Linking automated scripts to MTM tests
- Storing project solution on the Cloud