

Playwright

XPATH-Axes
How? When?

The Golden Rule

What

What is Xpath-Axes?

XML path based on relationship

When

When to use?

Not able to locate unique WebElement using Basic xpath.

How

How to write xpath?

In relation with other elements

Xpath-Axes (type 1 of 8)

Parent To child :

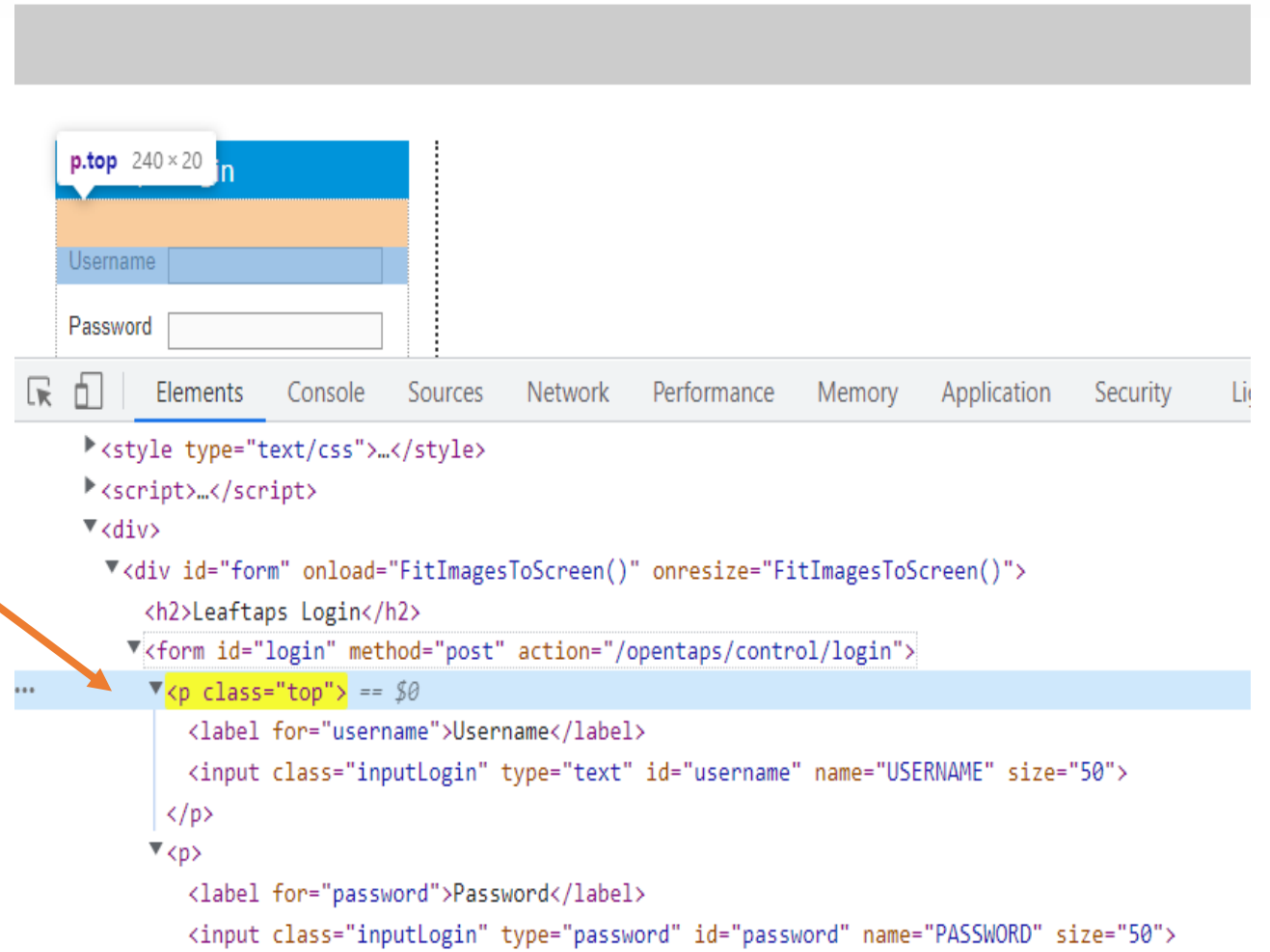
To reach the WebElement from **<form>(parent tag)** to **<p> (child)**

Syntax:

(parent realtive xpath)//(tagName of child)

Example:

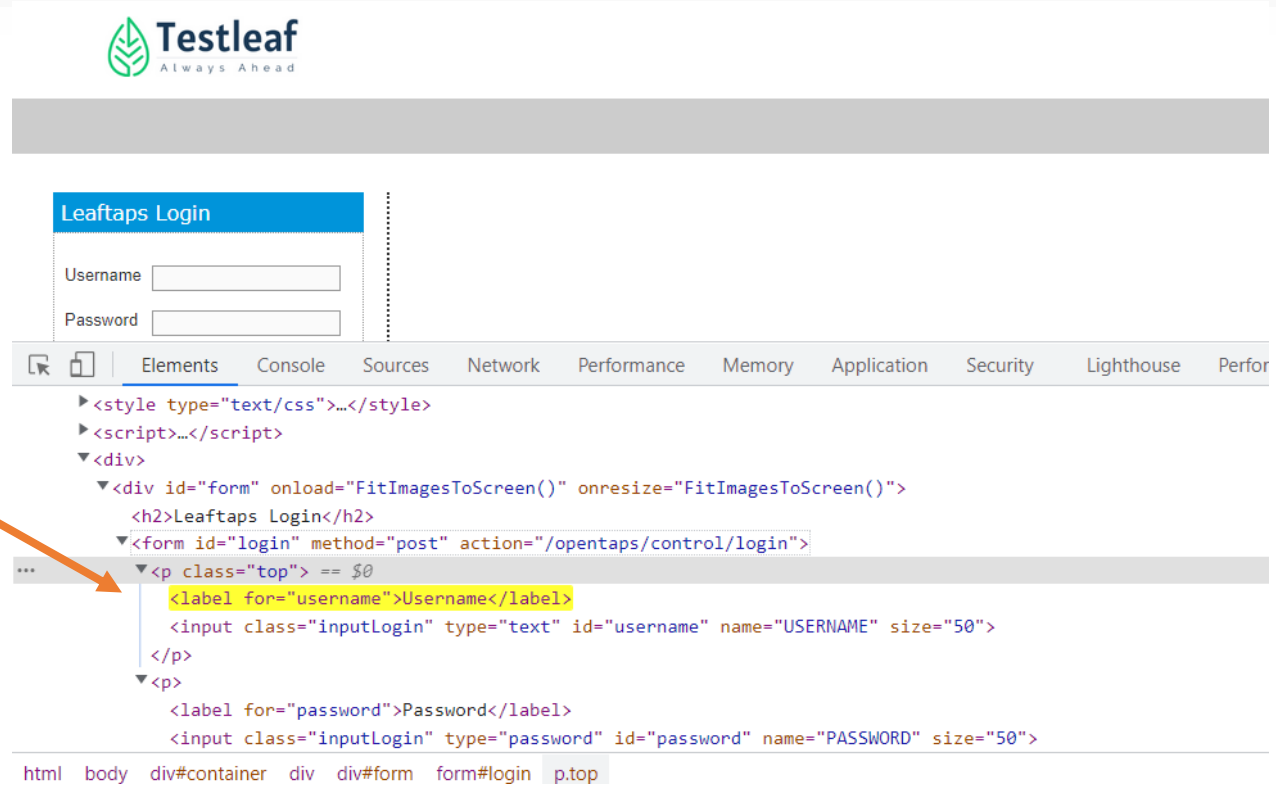
//form[@id='login']/p



Xpath-Axes (type 2 of 8)

GrandParent to child Relation :

To reach the WebElement from
<form>(grandparent tag) to
<label> (grand-child)



Syntax:

GrandParent relative xpath//tagName of grand child

Example:

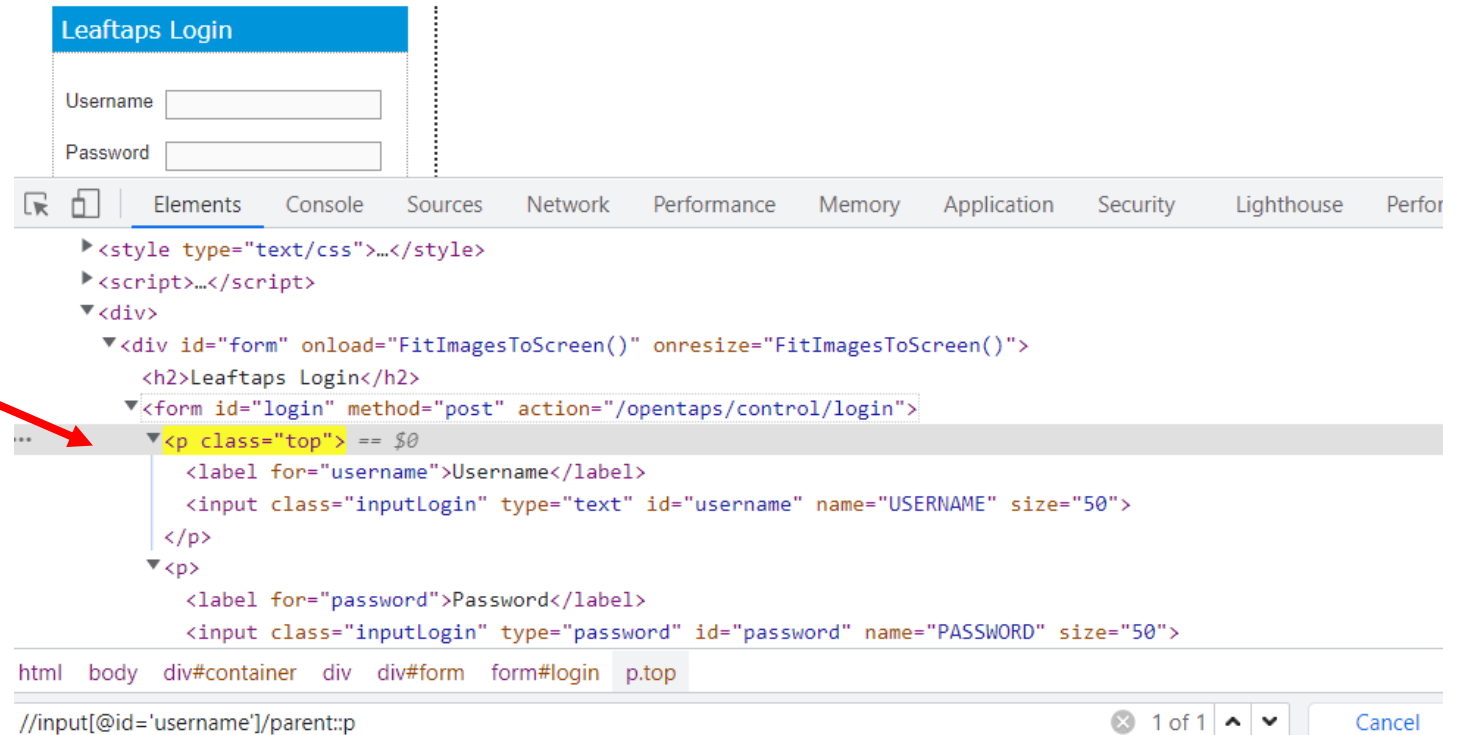
(//form[@id='login']//label)

Contd..

Xpath-Axes (type 3 of 8)

Child to parent :

To reach the WebElement from **<p>(child)**
to **<form> (parent)**



Syntax:

Child relative xpath/parent::parent tagName

Example

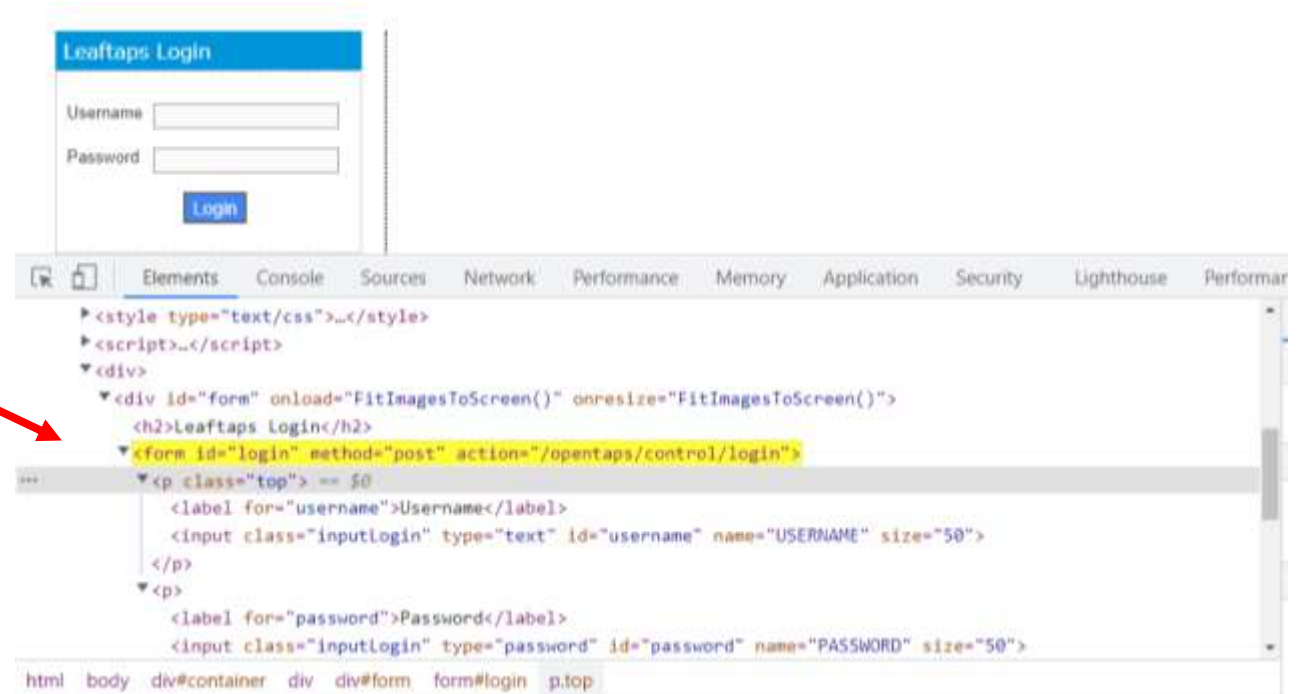
`//input[@id='username']/parent::p`

Contd..

Xpath-Axes(type 4 of 8)

GrandChild to Grand parent :

To reach the WebElement from <label>(grand-child) to <form> (grand-parent) , we have the keyword **ancestor**



Syntax:

GrandChild relative xpath/ancestor::tagName of grand parent

Example:

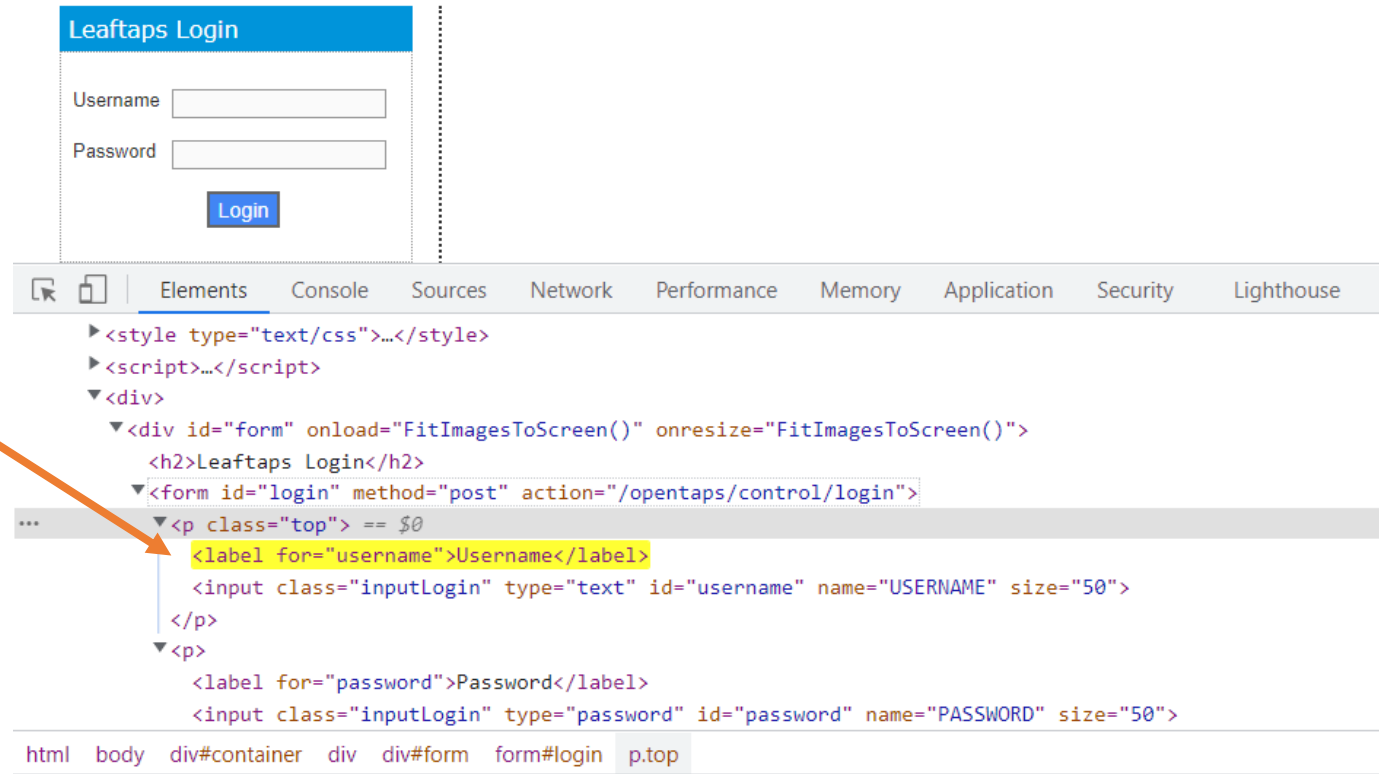
//input[@id='password']/ancestor::form

Contd..

Xpath-Axes(type 6 of 8)

Younger Sibling to elder Sibling:

To reach the WebElement from
Second <label> (child) to first<label> (child)
of same parent we have the keyword
preceding-sibling(finding from bottom to top)



Syntax:

Younger sibling relative xpath/preceding-sibling::tagName of Elder sibling

Example

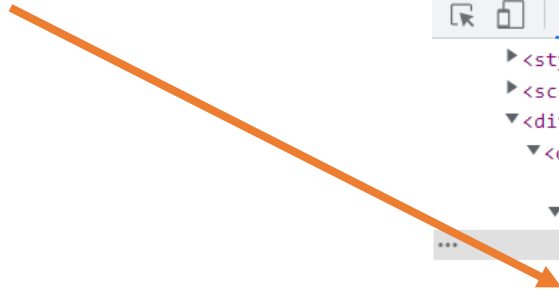
`//input[@id='username']/preceding-sibling::label`

Xpath-Axes(type 5 of 8)

Elder Sibling to Younger Sibling :

To reach the WebElement from <label> (child) to <label> (child) of same parent..

- we have the keyword **following-sibling** (finding from top to bottom)



```
<style type="text/css">...</style>
<script>...</script>
<div>
  <div id="form" onload="FitImagesToScreen()" onresize="FitImagesToScreen()">
    <h2>Leaftaps Login</h2>
    <form id="login" method="post" action="/opentaps/control/login">
      <p class="top"> == $0
        <label for="username">Username</label>
        <input class="inputLogin" type="text" id="username" name="USERNAME" size="50">
      </p>
      <p>
        <label for="password">Password</label>
        <input class="inputLogin" type="password" id="password" name="PASSWORD" size="50">
      </p>
    </form>
  </div>
</div>
```

html body div#container div div#form form#login p.top

Syntax:

(Elder sibling relative xpath)/following-sibling::tagName of younger sibling

Example:

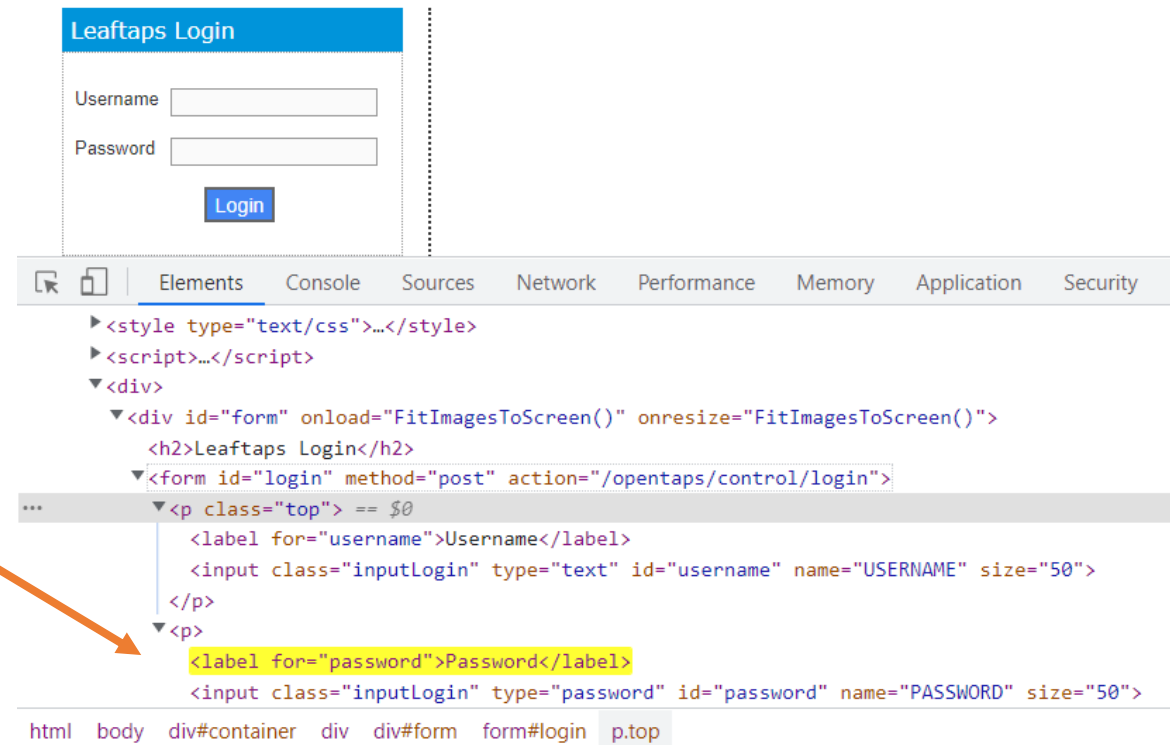
//label[text()='Username']/following-sibling::input

Contd..

Xpath-Axes(type 7 of 8)

Elder cousin to Younger cousin :

To reach the WebElement from first parent child <label> (child) to second parent child <label> (child) we have the keyword **following** (finding from top to bottom)



Syntax:

Elder cousing relative xpath/following::tagName of younger Cousin

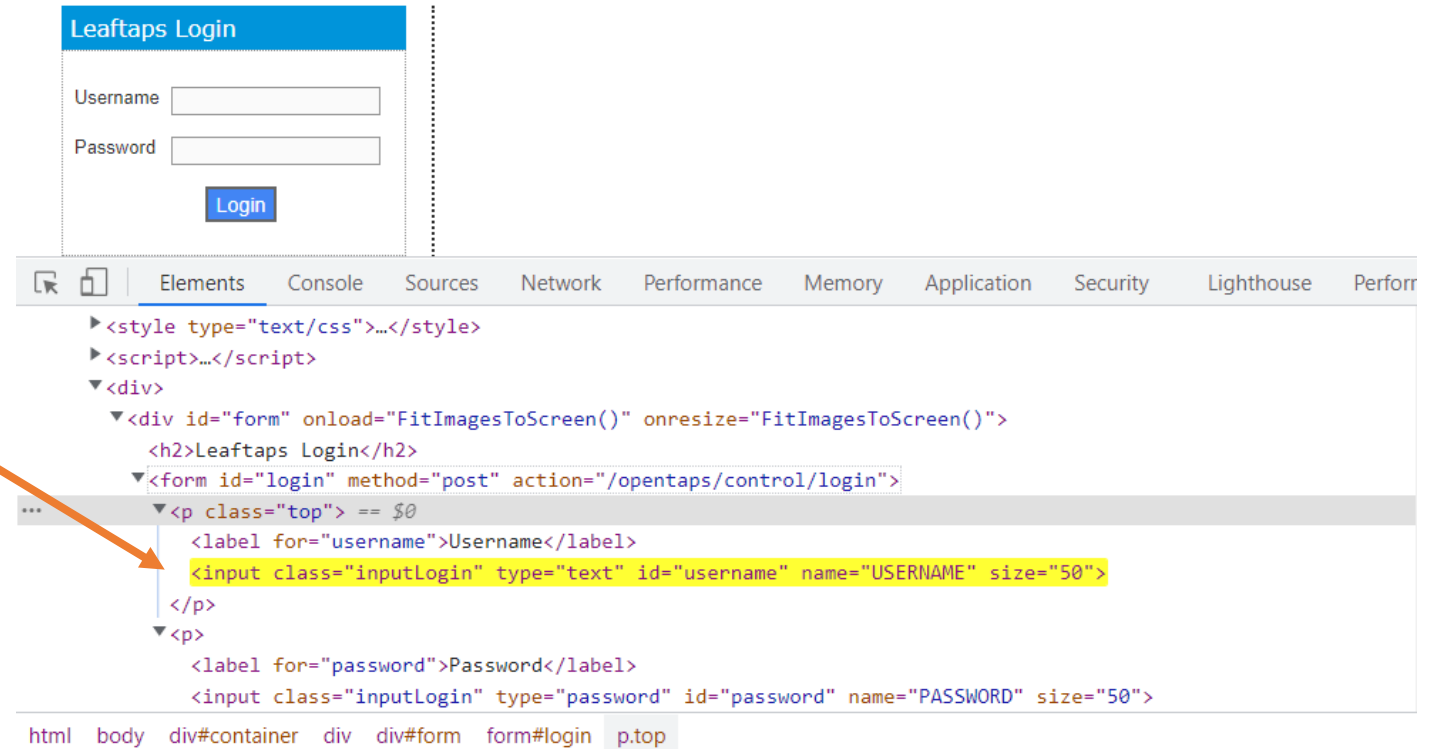
Example

//input[@id='username']/following::label

Xpath-Axes(type 8 of 8)

Younger cousin to Elder cousin :

To reach the WebElement from second parent child <label> (child) to first parent child <label> (child) we have the keyword **preceding**(finding from bottom to top)



The screenshot shows a web browser window with a login form titled "Leaftaps Login". The form contains two input fields: "Username" and "Password", and a "Login" button. Below the form, the browser's developer tools are open, displaying the DOM tree. The tree structure is as follows:

```
<style type="text/css">...</style>
<script>...</script>
<div>
  <div id="form" onload="FitImagesToScreen()" onresize="FitImagesToScreen()">
    <h2>Leaftaps Login</h2>
    <form id="login" method="post" action="/opentaps/control/login">
      <p class="top"> == $0
        <label for="username">Username</label>
        <input class="inputLogin" type="text" id="username" name="USERNAME" size="50">
      </p>
      <p>
        <label for="password">Password</label>
        <input class="inputLogin" type="password" id="password" name="PASSWORD" size="50">
      </p>
    </form>
  </div>
</div>
```

The XPath expression `html/body/div#container/div/div#form/form#login/p.top` is shown at the bottom of the DOM tree. An orange arrow points from the word "preceding" in the text above to the "preceding" keyword in the XPath expression.

Syntax:

Younger cousin `xpath/preceding::tagName of Elder cousin`

Example

`//label[text()='Password']/preceding::input`

Quick Recall

- ✓ Axes Xpath-What , when, How?
- ✓ 8 types of Relationship based Xpath
 - Parent to Child & Viceversa
 - Grandparent to Grandchild & Viceversa
 - Sibling:
 - Elder to younger
 - Younger to Elder
 - Cousin
 - Elder to younger
 - Younger to Elder

Interview Tips

