

Xpath

in Selenium



PLAN



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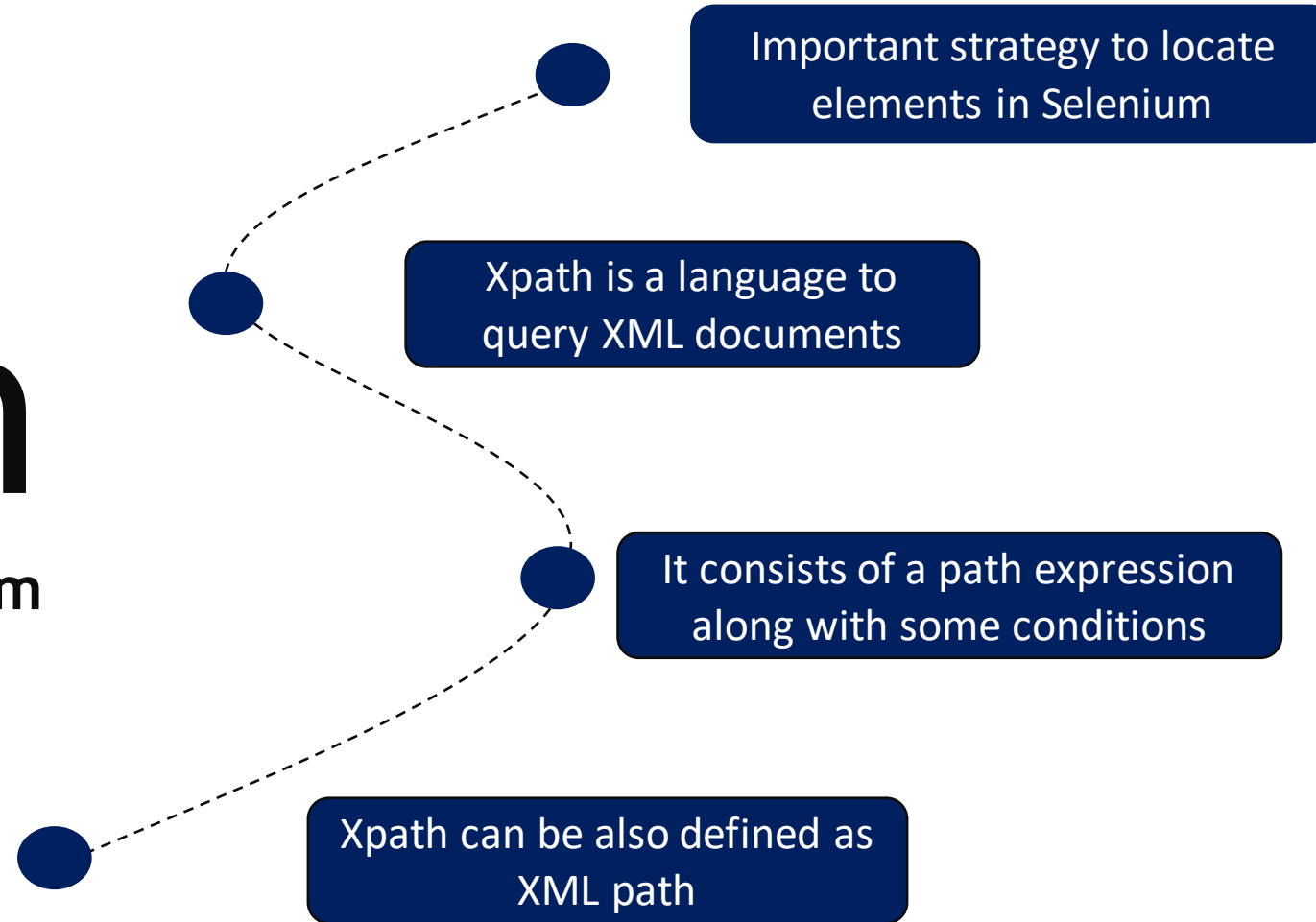
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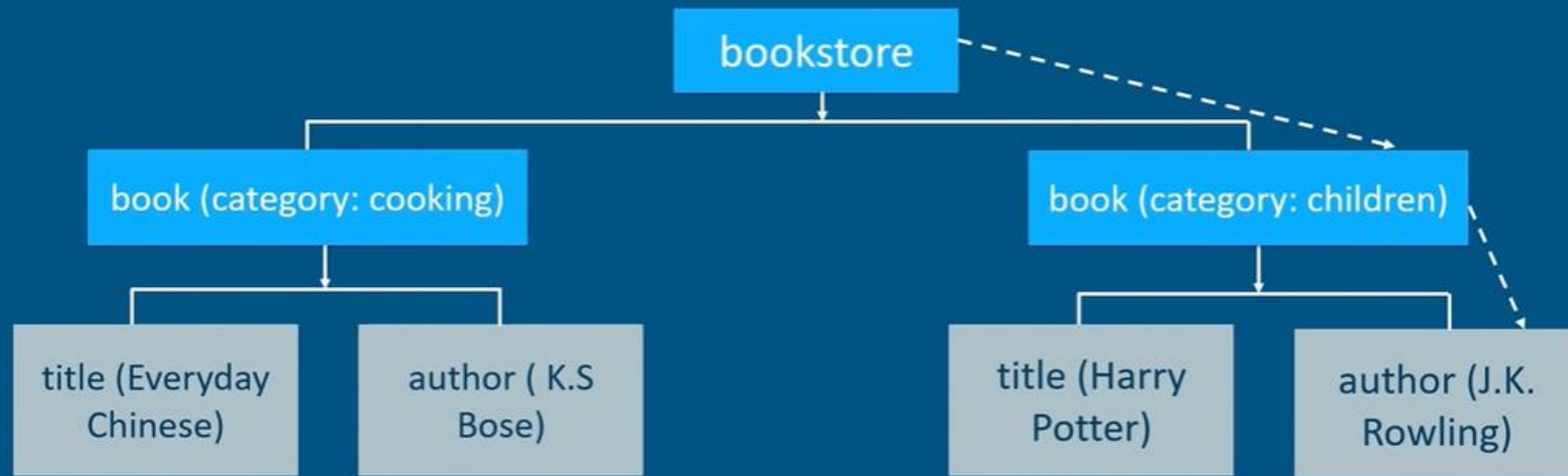
Xpath

in Selenium



```
<bookstore>
<book category= "cooking">
<title lang="en">Everyday Chinese</title>
<author>K.S.Bose</author>
<book>
<book category= "children">
<title lang="en">Harry Potter</title>
<author>J.K. Rowling</author>
<book>
```

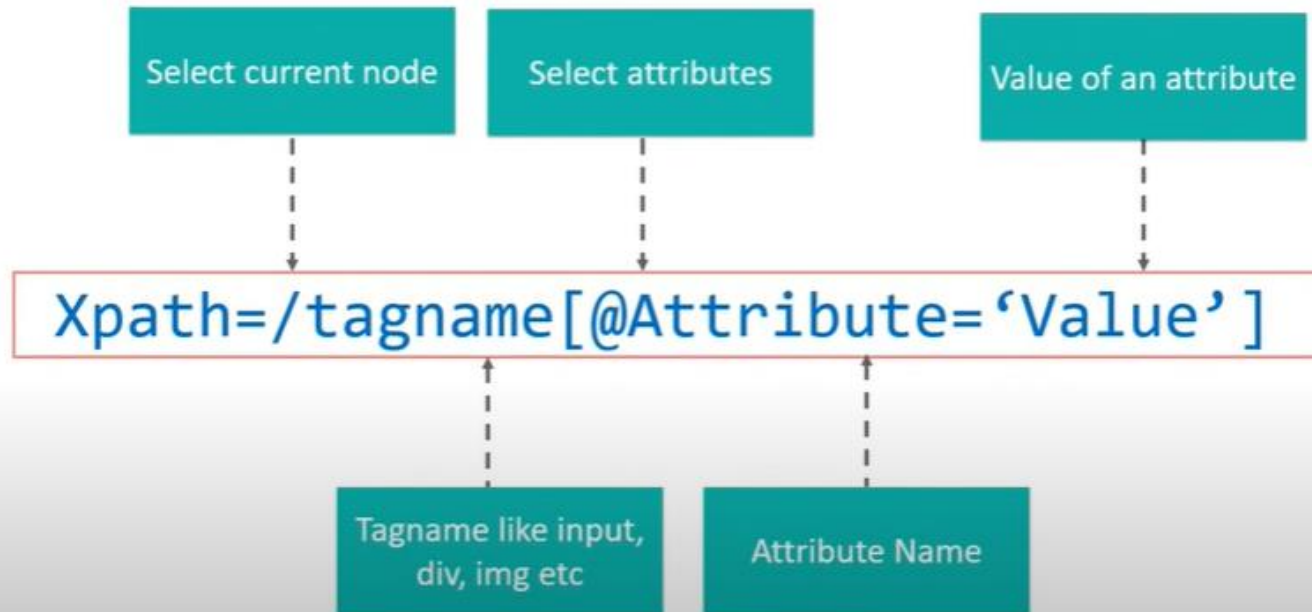
XML Tree



Xpath = `/bookstore/book[@category='children']/author`

Benefits of Xpath

- 1 Queries are compact
- 2 Queries are easily parsed
- 3 Queries are easy to read & type
- 4 Queries do not return repeated nodes
- 5 Syntax is simple for simple and common cases
- 6 You can uniquely identify any node in XML Document



Absolute Xpath

Relative Xpath

Absolute Xpath

Relative Xpath

It is the direct way to find the element, but the disadvantage of the absolute XPath is that if there are any changes made in the path of the element then that XPath gets failed.

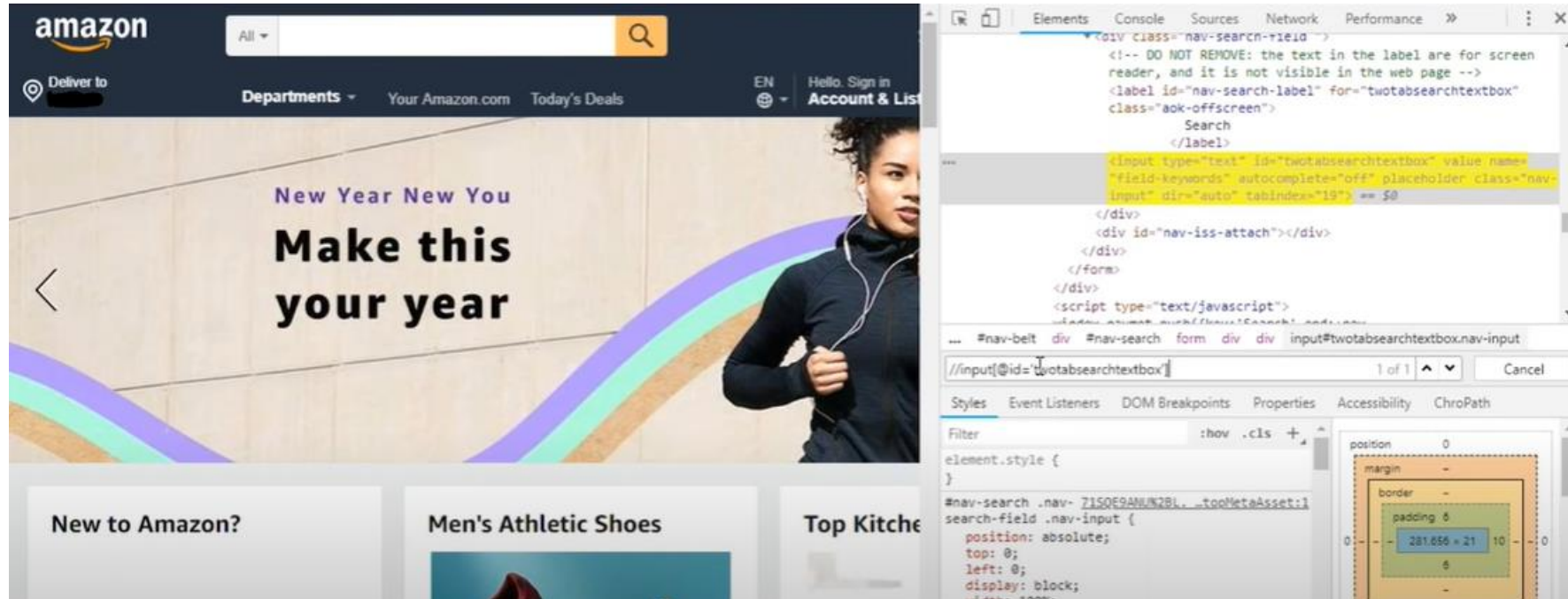
Ex: `/html/body/div[1]/section/div[1]/div`

Absolute Xpath

Relative Xpath

For, Relative Xpath the path starts from the middle of the HTML DOM structure. It starts with the double forward slash (//), which means it can search the element anywhere at the webpage

Ex: `//input[@id='ap_email']`



The image shows the Amazon homepage with a search bar and a Chrome DevTools overlay. The search bar is highlighted in yellow in the HTML view. The HTML view shows the following code:

```
<div class="nav-search-field">  
  <!-- DO NOT REMOVE: the text in the label are for screen  
  reader, and it is not visible in the web page -->  
  <label id="nav-search-label" for="twotabsearchtextbox"  
  class="aok-offscreen">  
    Search  
  </label>  
  <input type="text" id="twotabsearchtextbox" value name=  
  "field-keywords" autocomplete="off" placeholder class="nav-  
  input" dir="auto" tabindex="19" => $0  
  </div>  
</div>  
<div id="nav-iss-attach"></div>  
</div>  
</form>  
</div>  
<script type="text/javascript">  
  ...  
</script>
```

The CSS view shows the following styles for the search bar:

```
element.style {  
  position: absolute;  
  top: 0;  
  left: 0;  
  display: block;  
  width: 100%;  
}
```

The search bar is located at the top of the page, with a search button to its right. The page also features a banner for "New Year New You" and a section for "Men's Athletic Shoes".

The most important functions:

contains()

starts-with()

text()

contains()

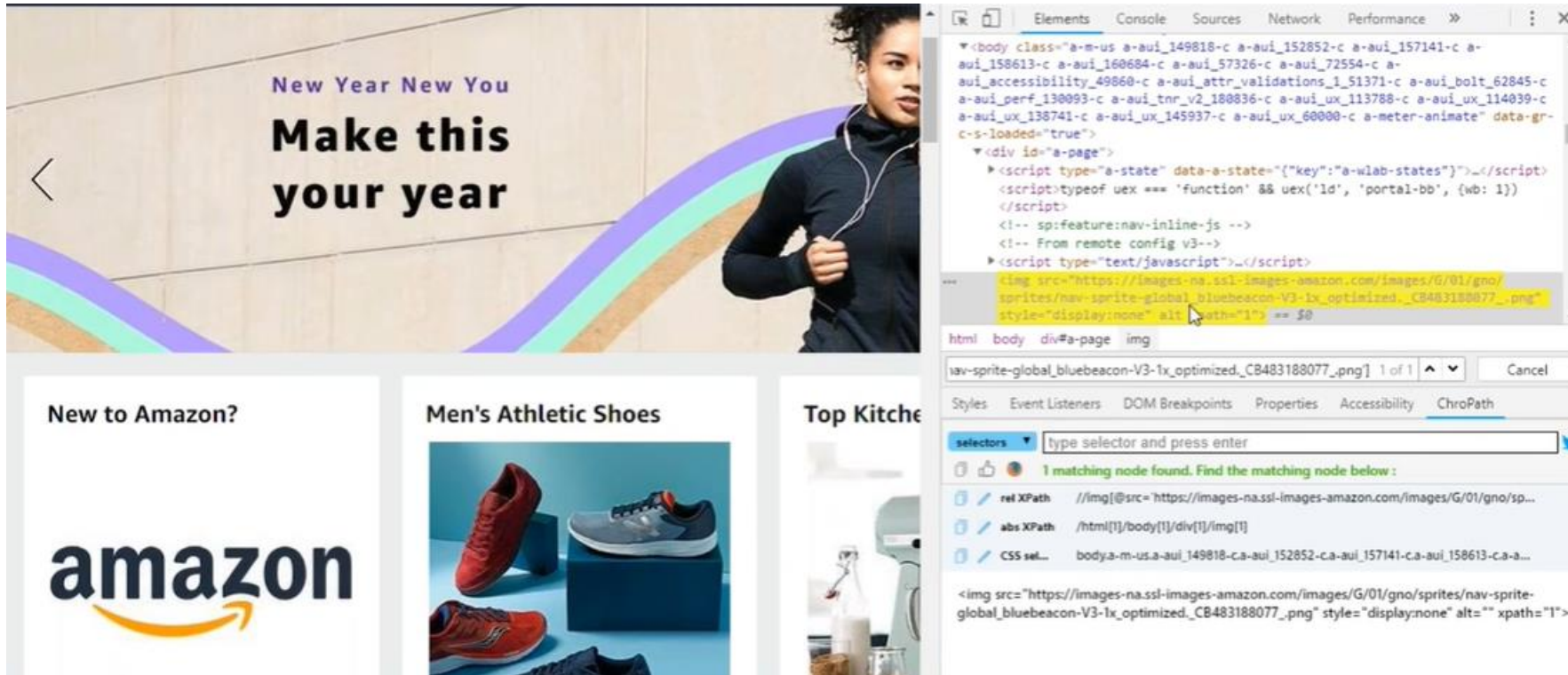
starts-with()

text()

contains() is a method used in XPath expression. It is used when the value of any attribute changes dynamically, for example, login information.

Syntax:

Xpath=//*[contains(@type,'sub')]



The screenshot shows the Amazon homepage with a banner for 'New Year New You' and 'Make this your year'. Below the banner are sections for 'New to Amazon?', 'Men's Athletic Shoes', and 'Top Kitchen'. A Chrome DevTools overlay is visible on the right, showing the 'Elements' panel with the DOM tree. The selected element is an tag with a src attribute pointing to a blue beacon image. The 'ChroPath' panel shows the XPath expression: `rel XPath: //img[@src='https://images-na.ssl-images-amazon.com/images/G/01/gno/sprites/nav-sprite-global_bluebeacon-V3-1x_optimized_CB483188077_.png']`. The 'selectors' panel shows the matching node found.

contains()

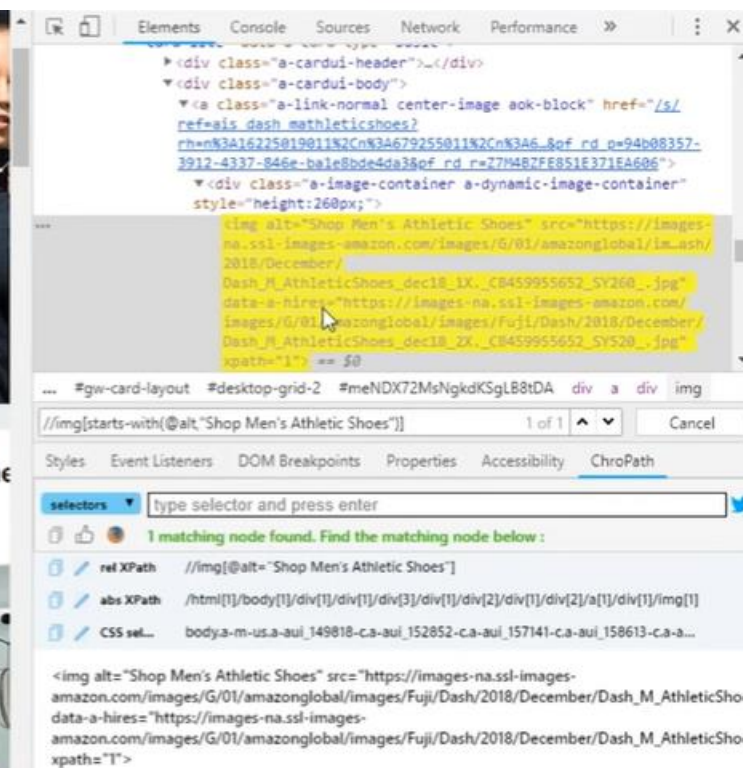
starts-with()

text()

starts-with function finds the element whose attribute value changes on refresh or any operation on the webpage.

Syntax:

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



New to Amazon?

amazon

Athletic Shoes



Top Kitchen



contains()

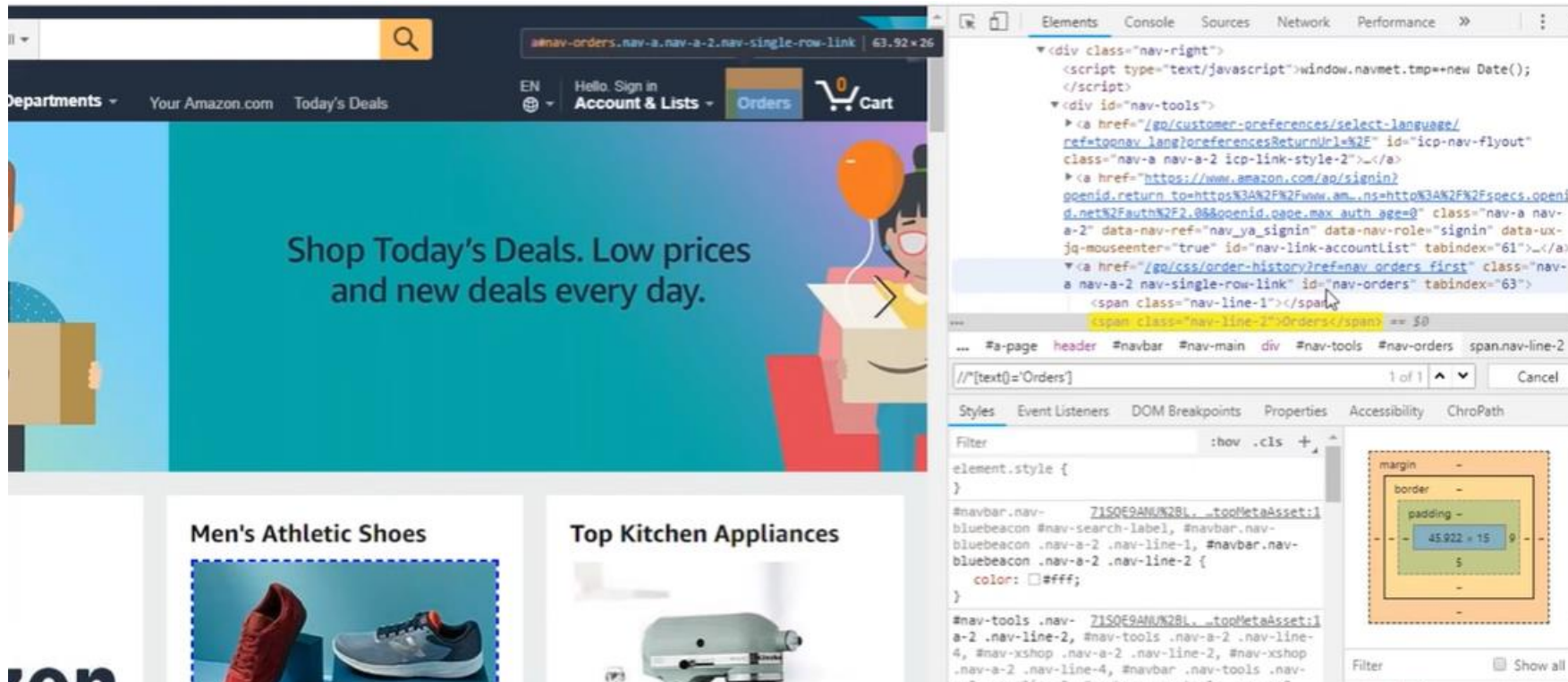
starts-with()

text()

In this expression, with text function, we find the element with exact text match as shown below. In our case, we find the element with text "UserID".

Syntax:

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



The screenshot shows the Amazon homepage with the Chrome DevTools 'Elements' panel open. The DOM tree highlights the 'nav-orders' element. The search bar at the bottom of the DOM tree shows the XPath expression `//*[text()='Orders']` with 1 result found. The 'Styles' panel shows the default styles for the selected element, including margin, border, and padding. The 'ChroPath' panel shows the path to the element: `#a-page > header > #navbar > #nav-main > div > #nav-tools > #nav-orders > span.nav-line-2`.