

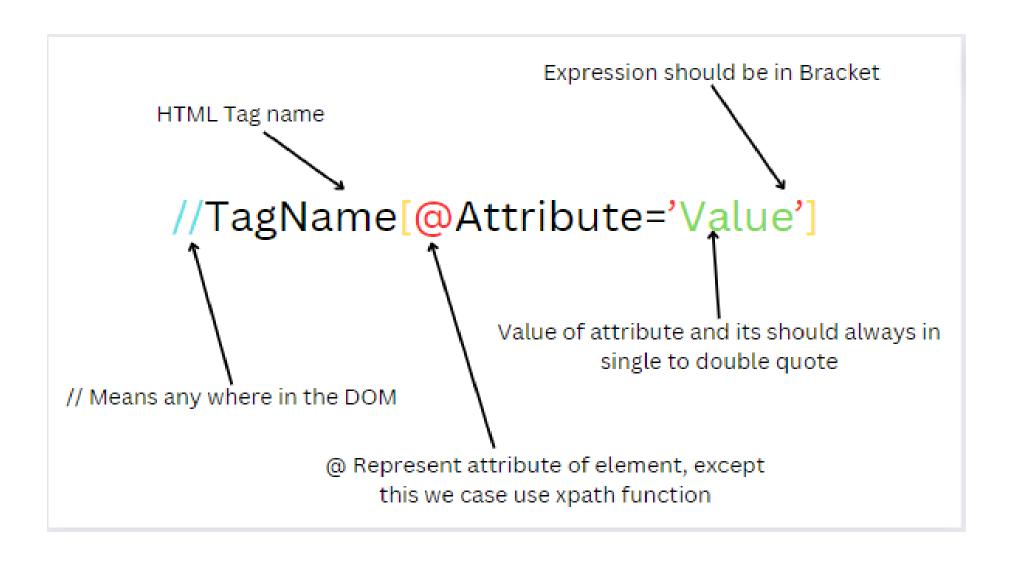
- 1. XPath Basics
- 2. XPath Functions
- 3. XPath Axes

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XPath Basic

- > XPath Syntax
 - Selecting Nodes
 - ➤ Selecting Unknown Nodes
 - ➤ Selecting Several Paths
 - ➤ Absolute and Relative
 - ➤ Parents and Children
 - > Index
 - ➤ Nested locators

XPath Syntax



Absolute and relative XPath

Absolute XPath

- The path from root element to targeted element without missing any elements in between.
- Absolute XPath starts form by using '/' (single forward slash) and '[index]' (square bracket with index).
- /html/body/div[2]/div/div[1]/form/input[2]

Relative XPath

- This XPath is specific to the target element. It uses expression to locate web element(s) in HTML documents.
- It uses "//" (double forward slash) and "/" along with other symbols, functions, and axes names.
- //*[@id="file-submit"]

Selecting Nodes

Index		
1	Node name	Selects all nodes with the name "node name"
2	/	Selects from the root node.
3	//	Select direct from given node
4		Selects the current node
5		Selects the parent of the current node
6	@	Selects attributes

Selecting Unknown Nodes

Index	Wild Card	Description
1	*	Matches any element node
2	@*	Matches attribute node

Selecting Several Paths

By using the | operator in an XPath expression we can select several paths.

Parents and Children

```
//Tag[@condition]/.. # Parent
//Tag[@condition]/Tag[condition] # Child
//Tag[@condition]/Tag[condition] # Search with in child)
```

Index

```
//Tag[@condition][index] // nth child of its parent
(//Tag[@condition])[index] // nth locator of this locator
```

Nested locators

```
//Tag[tag[@condition]]  // nested locator
//Tag[.//tag[@condition]]  // nested locator
```

XPath Functions

- contains()
- > starts-with()
- > position()
- **>** last()
- > count()
- normalize-space()
- translate()

- > round()
- > floor()
- **>** not()
- >string-length()

K Lo

contains()

Console

Recorder 🗸

Elements

```
▼ <div class="content-box">
                ▼ <div class="element-wrapper compact pt-4">
                  ▼ <div class="element-actions">
                    ▼<a class="btn btn-primary btn-sm" href="#">
                      ▶<i class="os-icon os-icon-ui-22">•••</i>
                       <span>Add Account</span> == $0
                     </a>
                    ▼<a class="btn btn-success btn-sm" href="#">
                      ▶ <i class="os-icon os-icon-grid-10"> • </i>
                       <span>Make Payment
                     </a>

◆ -w div.content-i div.content-box div.element-wrapper.compact.pt-4 div.element-actions a.btn.btn-primary.btn-sm span

   //span[contains(text(), 'Add')]
                                                                                           Cancel
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                    n=eyJ0eXB1IjowLCJjcmVhdG1vb190aW11IjoxNjk2OTIxNzM1LCJjYWxsc210ZV9pZCI6MzgxMjI5MDc5NTc1OTQ ^
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                    2fQ%3D%3D" method="post" onsubmit id="u_0_2_RY">
                                                                                                                Filter
                      <input type="hidden" name="jazoest" value="2978" autocomplete="off">
                      <input type="hidden" name="lsd" value="AVpBoq6nf4k" autocomplete="off">
                                                                                                                element.stv
                     ▼ <div>
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                          testid="royal_email" placeholder="Email address or phone number" autofocus="1"
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                          aria-label="Email address or phone number"> == $0
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//input[contains(@placeholder, "Email address")]
                                                                                 Cancel
                                                                                                                 8icy . 61
```

Performance insights Z

Network

Sources

Performance

//span[contains(text(),'Add')]

//input[contains(@placeholder, "Email address")]

starts-with()

```
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                   <span>Add Account</span> == $0
                  </a>
                ▼<a class="btn btn-success btn-sm" href="#">
                  ▶ <i class="os-icon os-icon-grid-10"> • </i>
                   <span>Make Payment</span>
                 </a>
               </div>
               <h6 id="time" style="text-align: center;font-size: x-large;color:red">Your nearest branch
               closes in: 30m 5s</h6>
              ▶ <h6 class="element-header"> ··· </h6>
              <div class="element-box-tp">...</div>

◀ -w div.content-i div.content-box div.element-wrapper.compact.pt-4 div.element-actions a.btn.btn-primary.btn-sm span
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                      2fQ%3D%3D" method="post" onsubmit id="u 0 2 RY">
                        <input type="hidden" name="jazoest" value="2978" autocomplete="off">
                        <input type="hidden" name="lsd" value="AVpBoq6nf4k" autocomplete="off">
                      ▼<div>
                        ▼ <div class="_6lux">
                           <input type="text" class="inputtext 55r1 6luy" name="email" id="email" data-</pre>
                           testid="royal_email" placeholder="Email address or phone number" autofocus="1"
                            aria-label="Email address or phone number"> == $0
                         </div>
                        ▶ <div class=" 6lux"> ··· </div>
                        </div>
                        <innut type="hidden" autocomplete="off" name="login source" value="comet headerless log"</pre>

¶ div. 8esn div. 8iep. 8icy. 9ahz. 9ah- div. 6luv. 52jv form#u_0_2_RY. 9vtf div div. 6lux input#email.inputtext. 55r1. 6luy

//input[starts-with(@placeholder, "Email address")]
                                                                                      Cancel
```

//span[starts-with(text(),'Add')]

//input[starts-with(@placeholder, "Email address")]

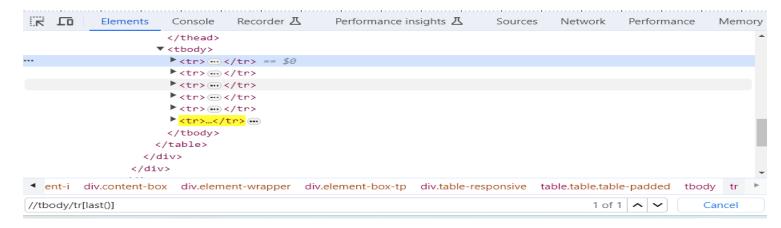
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position()

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```

//tr[position()= 3]

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//tbody/tr[last()]

count()

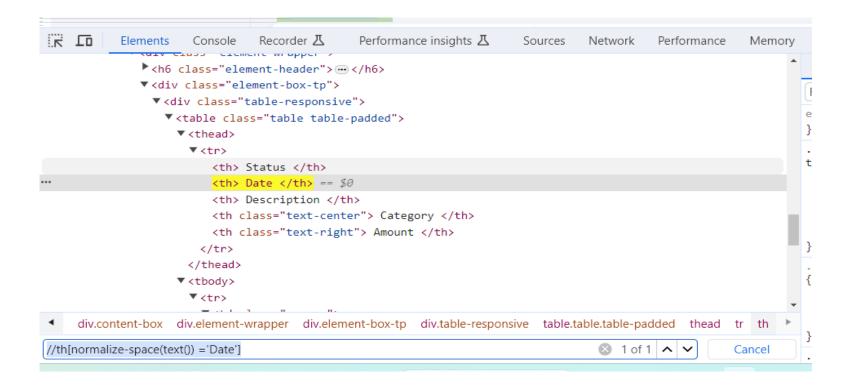
//tbody/tr/td[count(//thead/tr/th[contains(text(), 'Date')+1])]



normalize-space()

If an element has spaces in its text or in the value of any attribute, then to create an XPath for such an element we have to use the normalize-space function. It removes all the trailing and leading spaces from the string. It also removes every new tab or line existing within the string.

//th[normalize-space(text()) ='Date']



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translate()

//th[translate(text(), 'ABCDEFGHIJKLMNOPQRSTUVWXYZ', 'abcdefghijklmnopqrstuvwxyz') =' date ']

```
Performance insights Z
                                                      Sources Network Performance Memory
        ▶ <h6 class="element-header"> ··· </h6>
          ▼ <div class="element-box-tp">
            ▼ <div class="table-responsive">
             ▼
              ▼ <thead>
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                                                                                      .t
                                                                                      th
                   Status 
                   Date  == $0
                   Description 
                   Category 
                   Amount 
                 </thead>
               ▼ 
                ▼
   div.content-box div.element-wrapper div.element-box-tp div.table-responsive table.table.table-padded thead tr th
//th[translate(text(), 'ABCDEFGHIJKLMNOPQRSTUVWXYZ', 'abcdefghijklmnopqrstuvwxyz') = ' date ']
```

//th[normalize-space(translate(text(), 'ABCDEFGHIJKLMNOPQRSTUVWXYZ', 'abcdefghijklmnopqrstuvwxyz')) ='date']

round()

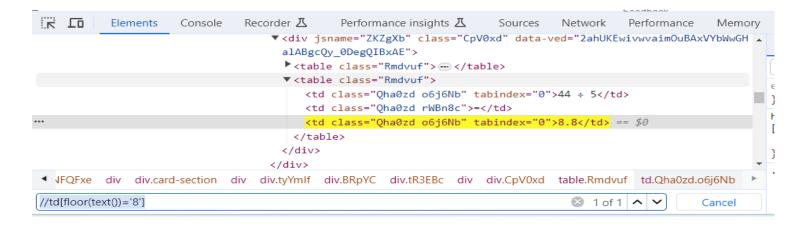
//td[round(text())='9']

```
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                         alABgcQy_0DegQIBxAE">
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                          </div>
                        </div>

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//td[round(text())='9]
                                                       Cancel
```

floor()

//td[floor(text())='8']



not()

//input[@type="radio" and not(@value='2')]

```
...
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                             <label class="_58mt" for="u_2_4_xa">Female</label>
                             <input type="radio" class="_8esa" name="sex" value="1" id="u_2 4_xa"> == $0
***
                           </span>
                         ▼<span class=" 5k 2 5dba">
                             <label class="_58mt" for="u_2_5_eC">Male</label>
                             <input type="radio" class=" 8esa" name="sex" value="2" id="u 2 5 eC">
                           </span>
                         ▼<span class=" 5k 2 5dba">
                             <label class="_58mt" for="u_2_6_M1">Custom</label>
                             <input type="radio" class="_8esa" name="sex" value="-1" id="u_2_6_M1">

¶ iv#reg_form_box.large_form div#u_2_n_\+v.mtm._5wa2._5dbb span#u_2_o_CJ._5k_3 span._5k_2._5dba input#u_2_4_xa._8esa

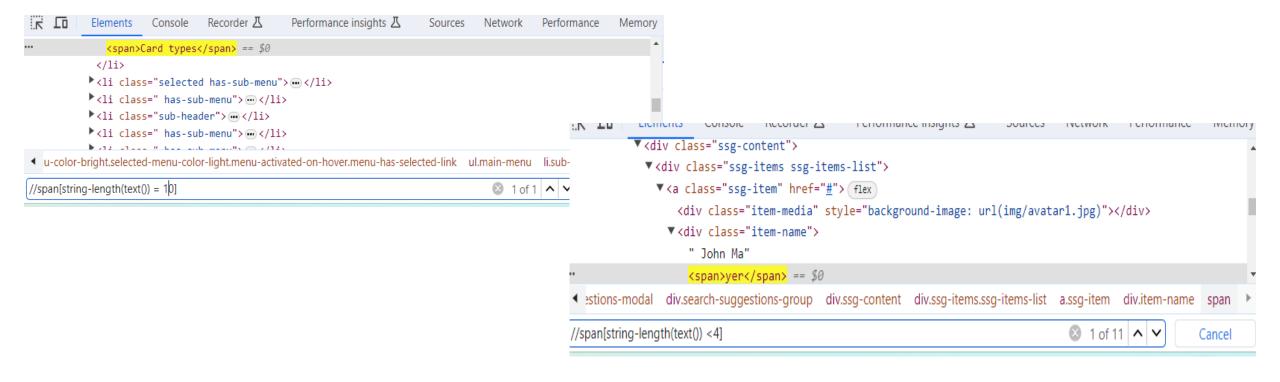
//input[@type="radio" and not(@value='2')]
                                                                                   Cancel
```

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string-length()

```
//span[string-length(text()) = 10]
//span[string-length(text()) > 30]
//span[string-length(text()) < 4]</pre>
```

```
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        ▼<div class="search-suggestions-group">
          ▶ <div class="ssg-header"> ··· </div> flex
          ▼ <div class="ssg-content">
            <div class="ssg-items ssg-items-blocks"> ... </div> flex
            ▼ <div class="ssg-nothing-found">
              ▶ <div class="icon-w"> ··· </div>
               <span>No files were found. Try changing your query... == $0
◀ jestions-w div.search-with-suggestions-modal div.search-suggestions-group div.ssg-content div.ssg-nothing-found span
                                                                                   //span[string-length(text()) > 30]
                                                                                                        Cancel
```



XPath Axes

- **>** parent
- > child
- **≻**ancestor
- >ancestor-or-self
- ➤ descendent
- > descendent-or-self
- ➢ following
- > following-sibling
- ➤ preceding
- > preceding-sibling

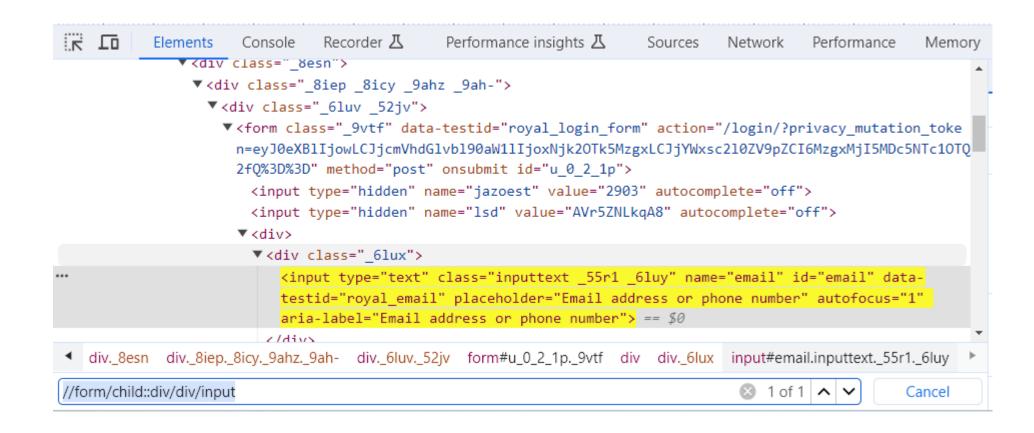
parent

//span[text()="Starbucks coffee"]/parent::td/parent::tr/td[5]/span



child

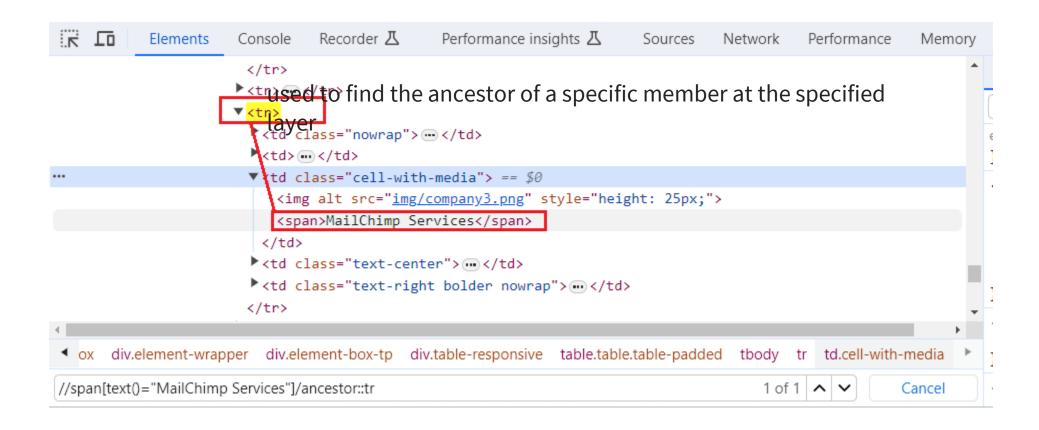
//form/child::div/div/input



ancestor

used to find the ancestor of a specific member at the specified layer

```
//span[text()="MailChimp Services"]/ancestor::table
//span[text()="MailChimp Services"]/ancestor::tr
```



ancestor-or-self

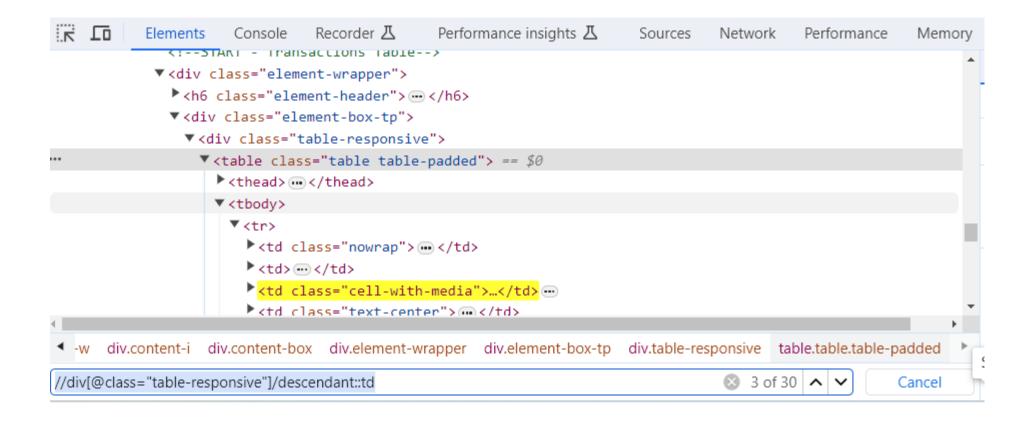
```
//span[text()="MailChimp Services"]/ancestor-or-self::span
//span[text()="MailChimp Services"]/ancestor-or-self::td
```



descendent

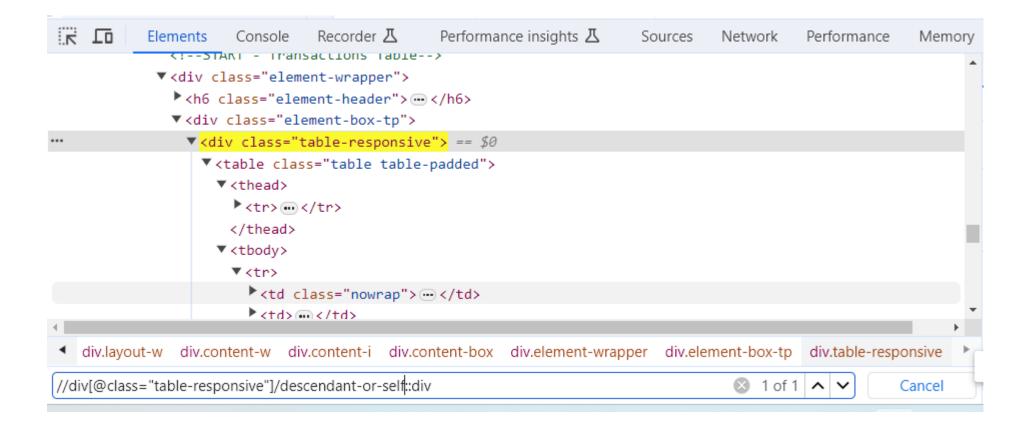
This function will return the descendant element of the particular element.

```
//div[@class="table-responsive"]/descendant::tr
//div[@class="table-responsive"]/descendant::td
```



descendent-or-self

```
//div[@class="table-responsive"]/descendant-or-self::div
//div[@class="table-responsive"]/descendant-or-self::td
```

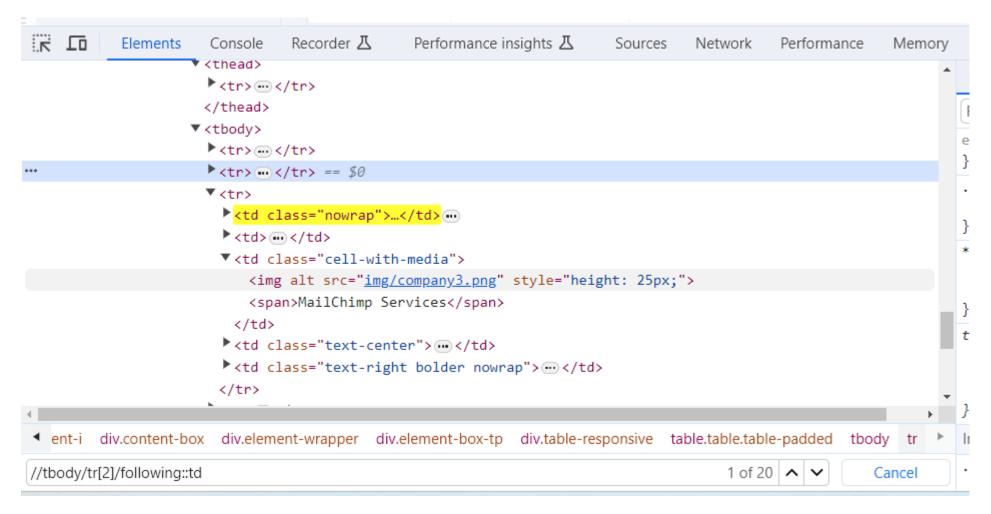


following

This function will return the immediate element of the particular component

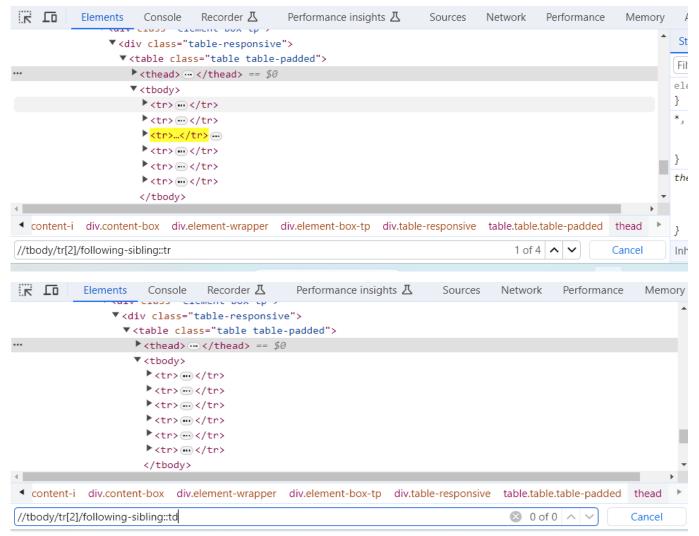
//tbody/tr[2]/following::tr

//tbody/tr[2]/following::td



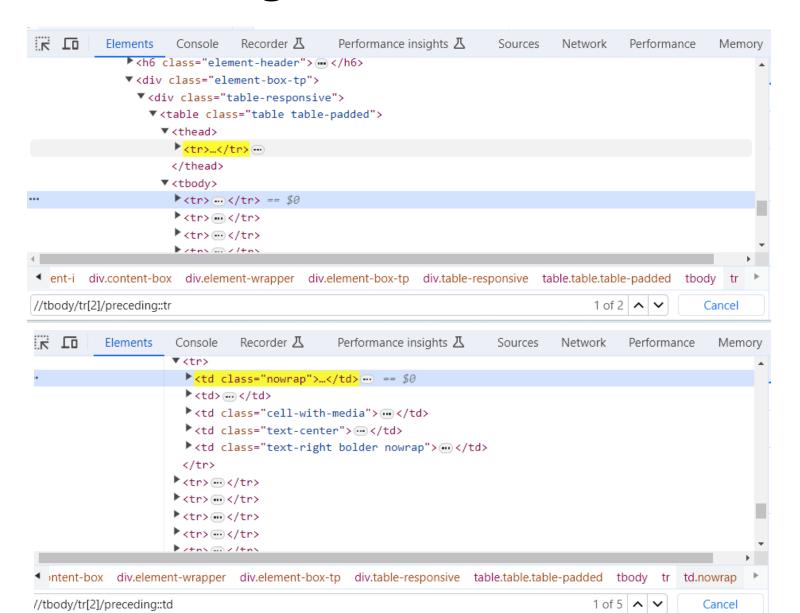
following-sibling

//tbody/tr[2]/following-sibling::tr



Preceding

This function will return the preceding element of the particular element

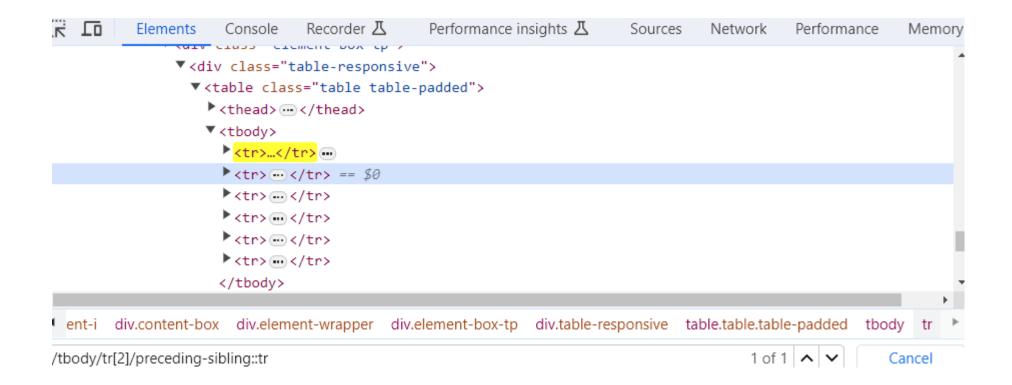


//tbody/tr[2]/preceding::tr

//tbody/tr[2]/preceding::td

preceding-sibling

```
//tbody/tr[2]/preceding-sibling::tr
//tbody/tr[2]/preceding-sibling::td
```



THANKS FOR READING