

=====

Tutor: **Sanjay Kumar**

Reference: **UDEMY**

Course: **XPath Tutorial from basic to advance level.**

=====

1. Course URL: <https://www.udemy.com/course/xpath-tutorial-from-basic-to-advance-level/>
 2. Document prepared by: **Rajat Verma**
 - a. <https://www.linkedin.com/in/rajat-v-3b0685128/>
 - b. <https://github.com/rajatt95>
 - c. <https://rajatt95.github.io/>
-

=====

=====1_Introduction & basic concepts of XPath=====

1. XPath:

- a. Each and every element on the web page has its own address
- b. XPath is the address of an element

2. Importance of XPath:

- a. As Important as the Tyres of a car
 - b. Scripts should not break
-

3. How to write XPath:

- a. **Absolute:** Single forward-slash (/)
 - i. Coming to Element step-by-step
 - ii. This makes XPath performance very slow
 - iii. Starts from HTML tag
- b. **Relative:** Double forward-slash (//)
 - i. Directly jump to the element
- c. **XPath syntax functions**
 - i. /tagName



- ii. `//tagName[@attribute='attributeValue']`
 - iii. AND, OR functions
 - iv. `text()`, `normalize-space()`, `.`
 - v. Index, `position.last`, etc.
 - vi. Relative XPath using axes
 - vii. Relative XPath without using axes
-

4. What is the right platform to write and verify XPath:

- a. Chrome DevTools
 - b. Console \$x
 - c. Using SelectorsHub
-

5. Get all the links on the page:

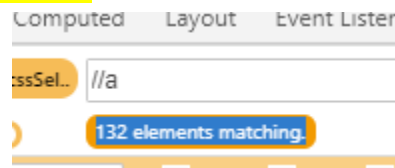
a. ChromeDevTools

- i. It actually matches the String as well
- ii. Therefore, it gives the wrong count



- 1. Search: Not only for XPath
 - 1. Find By String, Selector, or XPath

b. SelectorsHub



- i.
 - ii. SVG elements, Frames, Shadow DOM
 - iii. Intelli sense
-

====2_Writing normal XPath and relative XPath with advanced concepts=====

1. Relative XPath:

- a. `//tagName[@attribute='attributeValue']`
- b. `//tagName[contains(@attribute,'subStringOfattributeValue')]`
- c. `//tagName[text()='value']`
- d. `//tagName[contains(text(),'value')]`
- e. `//tagName[normalize-space()='value']`
 - i. **normalize-space()** -> removes the unnecessary spaces
- f. `//a[@title='Platform' and @class='dropdown-toggle']`
- g. `//a[@title='Platform' or @class='dropdown-toggle']`

NOTE:

- 1. `text()` -> not supported by cssSelector

1. Relative XPath using Axes:

- a. Following
- b. Preceding
- c. Ancestor - Grandparents
- d. Descendant

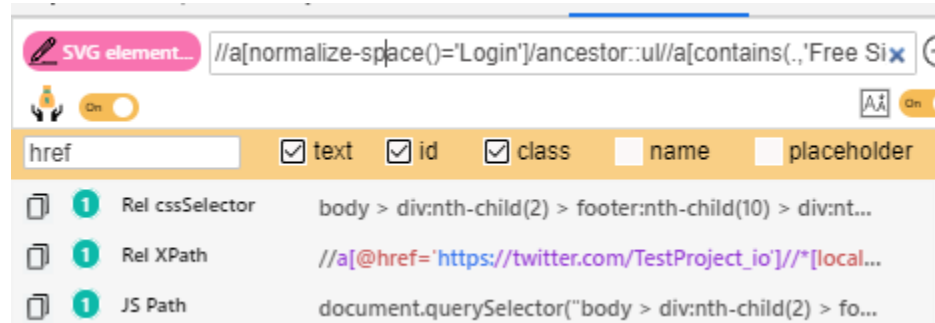
2. <https://testproject.io/>

- a. XPath for Forum w.r.t. Blog -
 - i. `//a[@title='Blog']/ancestor::ul//a[@title='Forum']`
 - 1. XPath for Blog
 - 2. Go to common Parent
 - 3. Traverse to Forum
- b. XPath for Platform w.r.t. Blog -
 - i. `//a[@title='Blog']/ancestor::ul//a[@title='Platform']`
- c. XPath for SignUp w.r.t. Login-
 - i. `//a[normalize-space()='Login']/ancestor::ul//a[contains(.,'Free Sign Up')]`

=====3_XPath for special types of Elements=====

1. SVG elements:

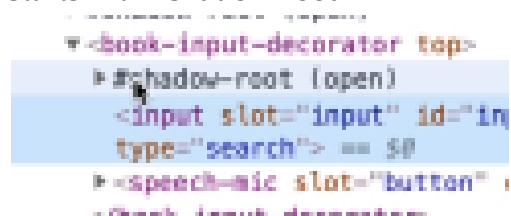
- a. These are the vector elements
- b. Used to provide the icons over the web page
- c. <https://testproject.io/>



- d.
- e. `//a[@href='https://twitter.com/TestProject_io']//*[local-name()='svg']`
- f. SVG element : `//*[local-name()='svg']`
- g. Path element : `//*[name()='path']`

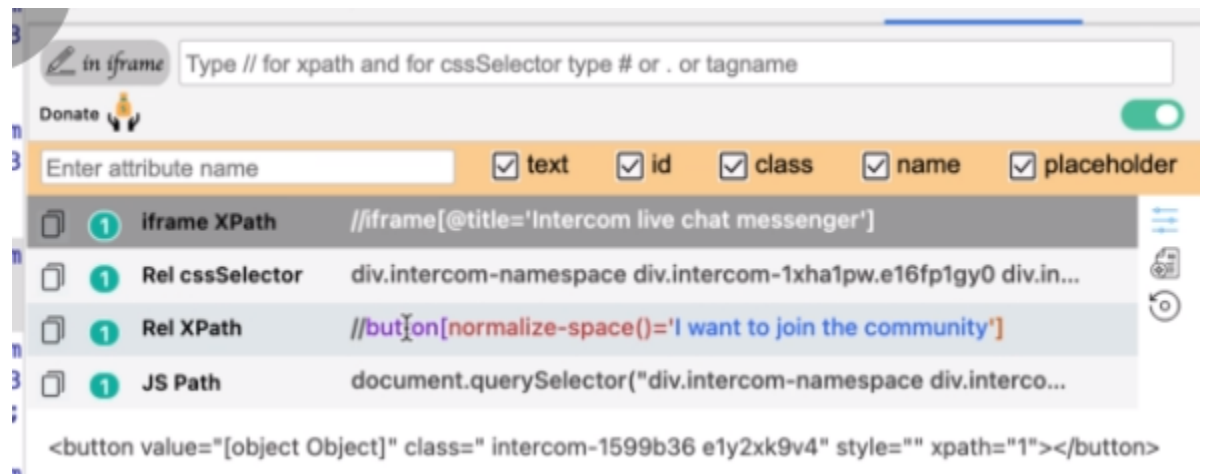
2. Shadow DOM elements:

- a. XPath does not support Shadow DOM or vice-versa
- b. It is DOM inside DOM
- c. Starts with `#shadow-root`



- d.
- e. Shadow DOM
 - i. Open -> we can access DOM inside it
 - ii. Close -> we can not access -> SECURITY

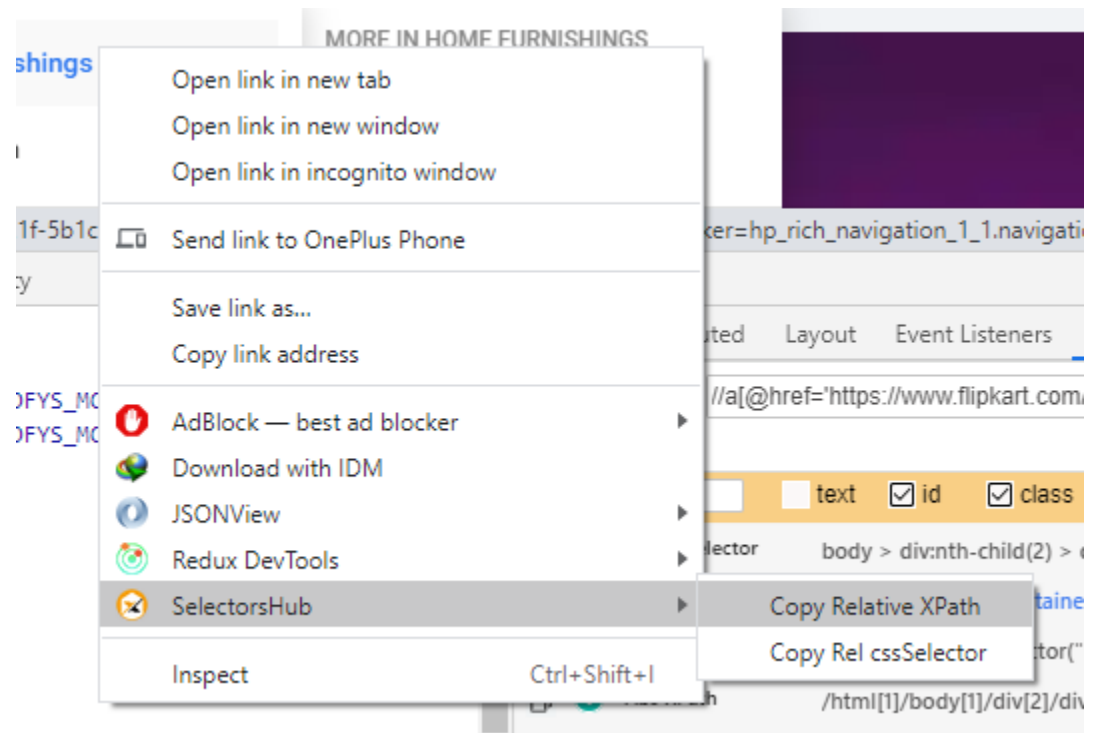
3. iFrames:



a.

4. Dynamic elements (which disappear from DOM):

a. Right-click -> Selectors Hub -> Copy Relative XPath



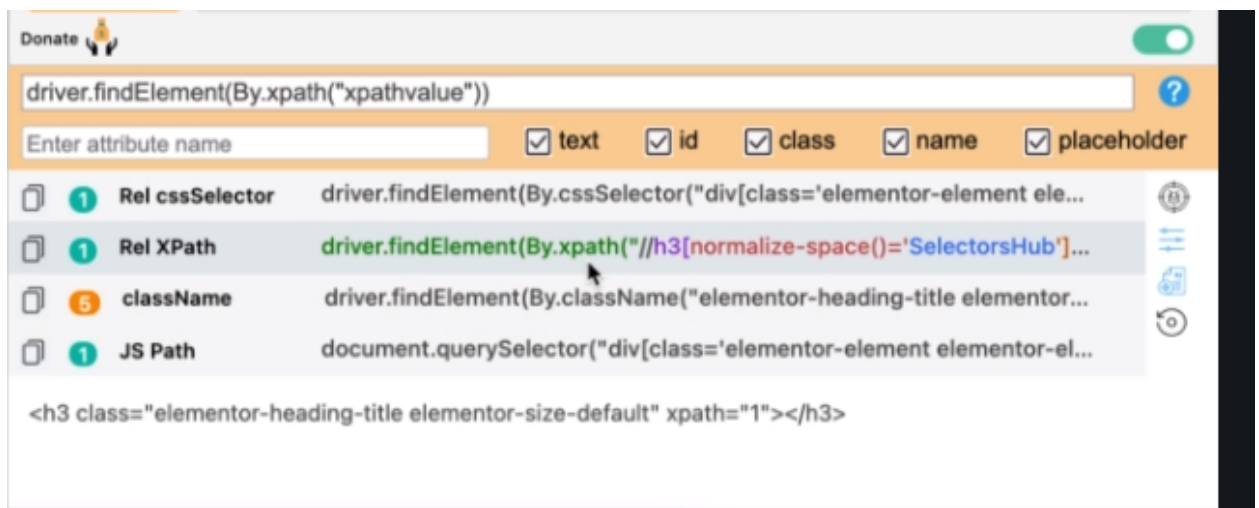
i.

b. Turn on Debugger



i.

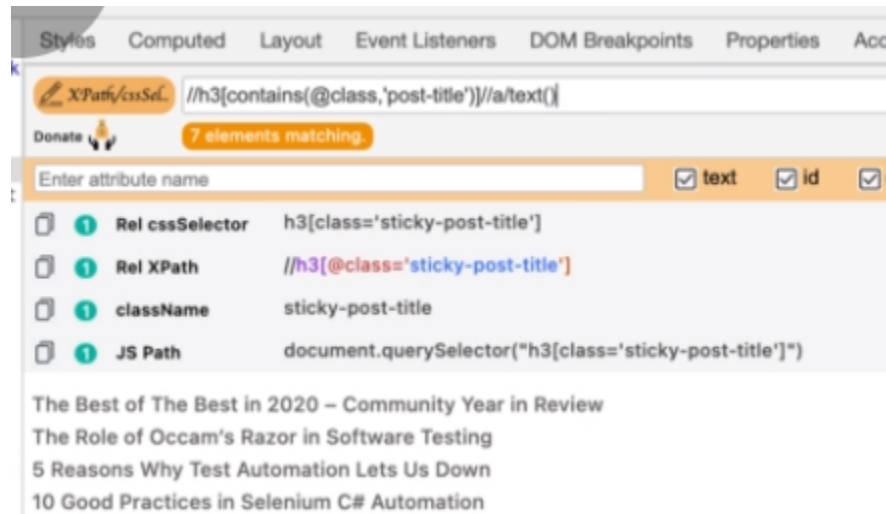
=====4_Tips and tricks=====



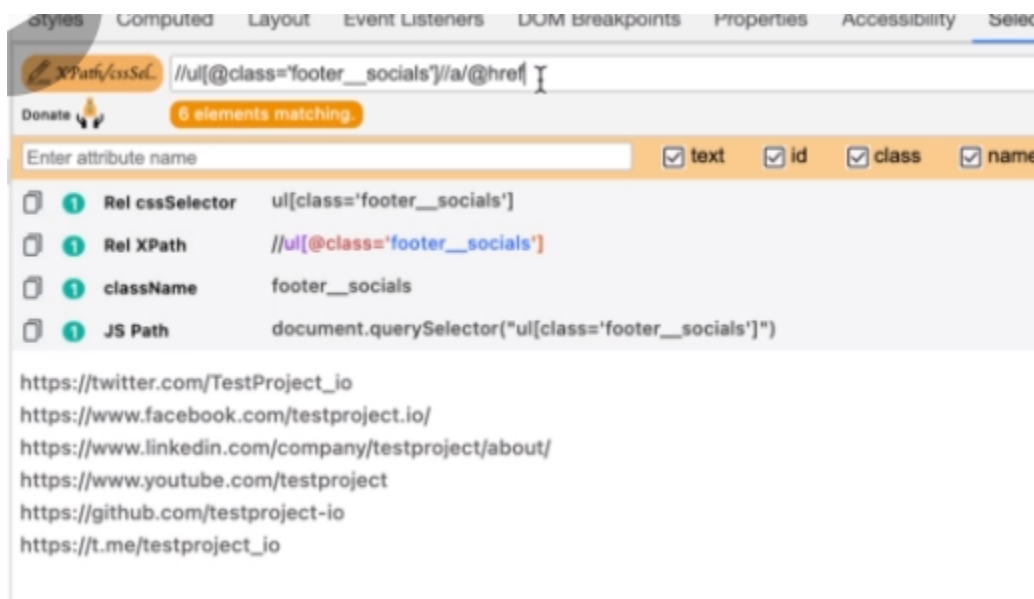
1.

=====5_Locator Challenge=====

1. Get text using XPath:



a.



- 1.
2. `//ul[@class='footer__socials']/a/@href` -> Gives all the links