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Tutor: **Sanjay Kumar**

Reference: **UDEMY**

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

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1. Course URL: https://www.udemy.com/course/xpath-tutorial-from-basic-to-advance-level/
2. Document prepared by: <mark>Rajat Verma</mark>
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   c. https://rajatt95.github.io/

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

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

   a. Chrome DevTools

   b. Console $x

   c. Using SelectorsHub

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5. Get all the links on the page:

   a. ==ChromeDevTools==
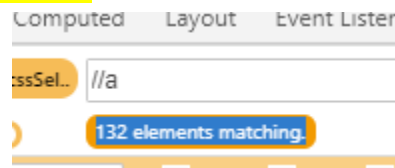
      i.   It actually matches the String as well

      ii.   Therefore, it gives the wrong count

         1.   ❌ 1 of 137 ^

     iii.   Search: Not only for XPath

         1.   Find By String, Selector, or XPath

   b. ==SelectorsHub==

        Computed   Layout   Event Lister

        :ssSel.. //a

        132 elements matching.

      i.

      ii.   SVG elements, Frames, Shadow DOM

     iii.   Intelli sense

===2_Writing normal XPath and relative XPath with advanced concepts====
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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
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1. **Relative XPath using Axes:**
   a. Following
   b. Preceding
   c. Ancestor - Grandparents
   d. Descendant
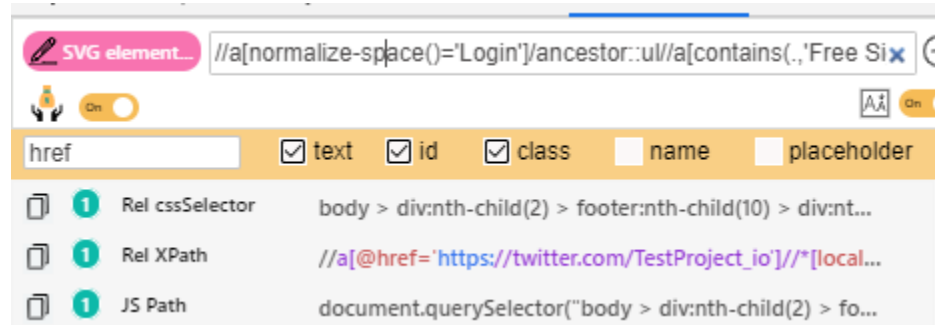2. **https://testproject.io/**
   a. XPath for Forum w.r.t. Blog -
      i. **//a[@title='Blog']/ancestor::ul//a[@title='Forum']**
         1. XPath for Blog
         2. Go to common Parent
         3. Traverse to Forum
   b. XPath for Platform w.r.t. Blog -
      i. **//a[@title='Blog']/ancestor::ul//a[@title='Platform']**
   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=========

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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. <mark>SVG element : **//*[local-name()='svg']**</mark>
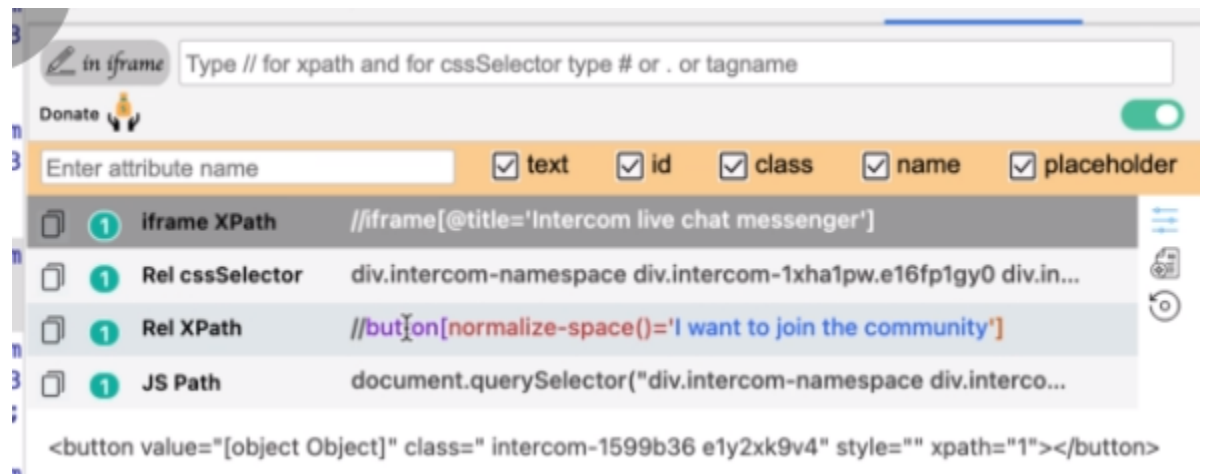   g. <mark>Path element : **//*[name()='path']**</mark>

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2. **Shadow DOM elements:**
   a. <mark>**XPath does not support Shadow DOM or vice-versa**</mark>
   b. It is DOM inside DOM
   c. Starts with **#shadow-root**
   d.
   e. **Shadow DOM**
      i. Open -> we can access DOM inside it
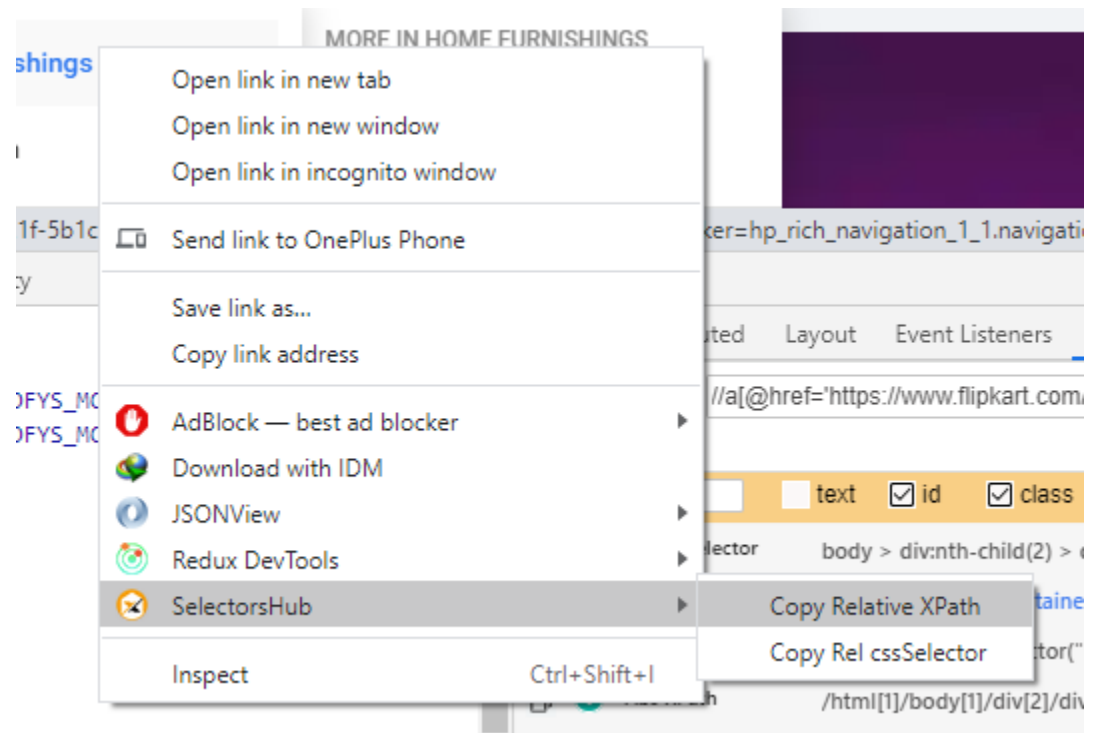   ii. Close -> we can not access -> SECURITY
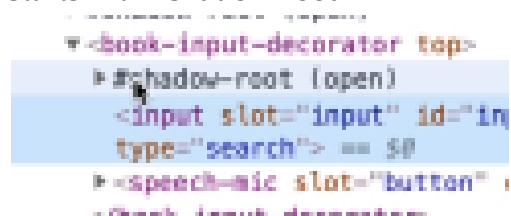
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3. **iFrames:**

   a.

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4. **Dynamic elements (which disappear from DOM):**
   a. Right-click -> Selectors Hub -> Copy Relative XPath

      i.

   b. **Turn on Debugger**
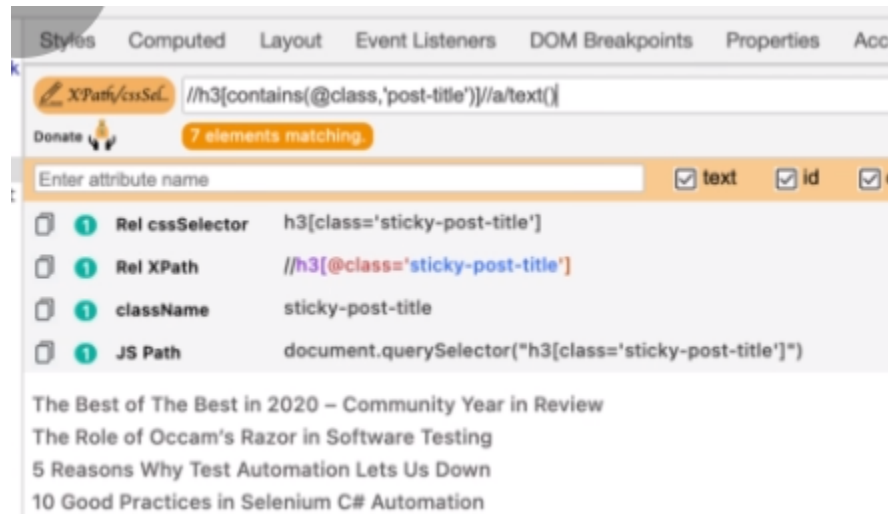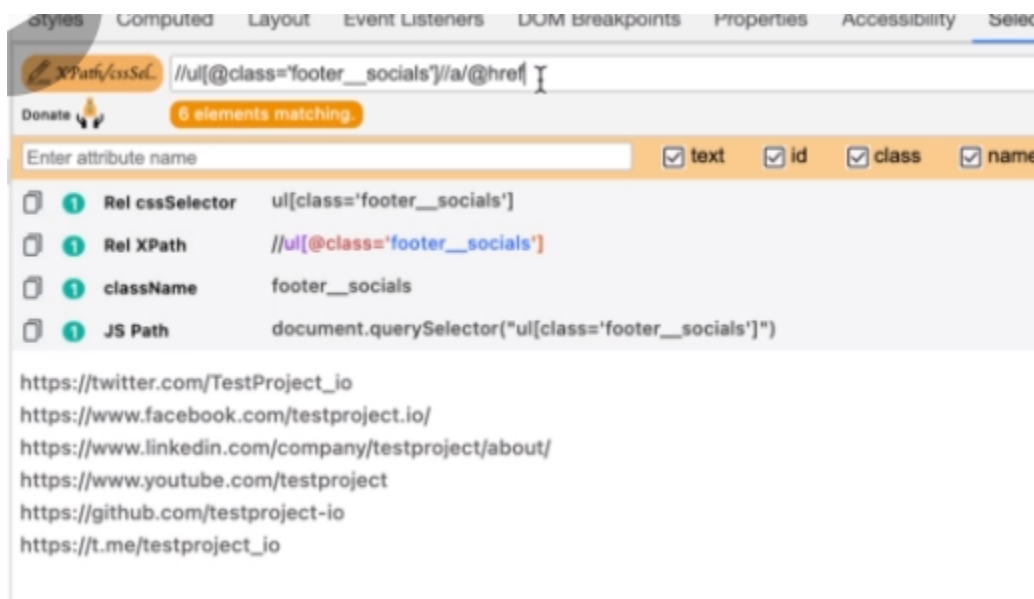
      i.

========4_Tips and tricks==========
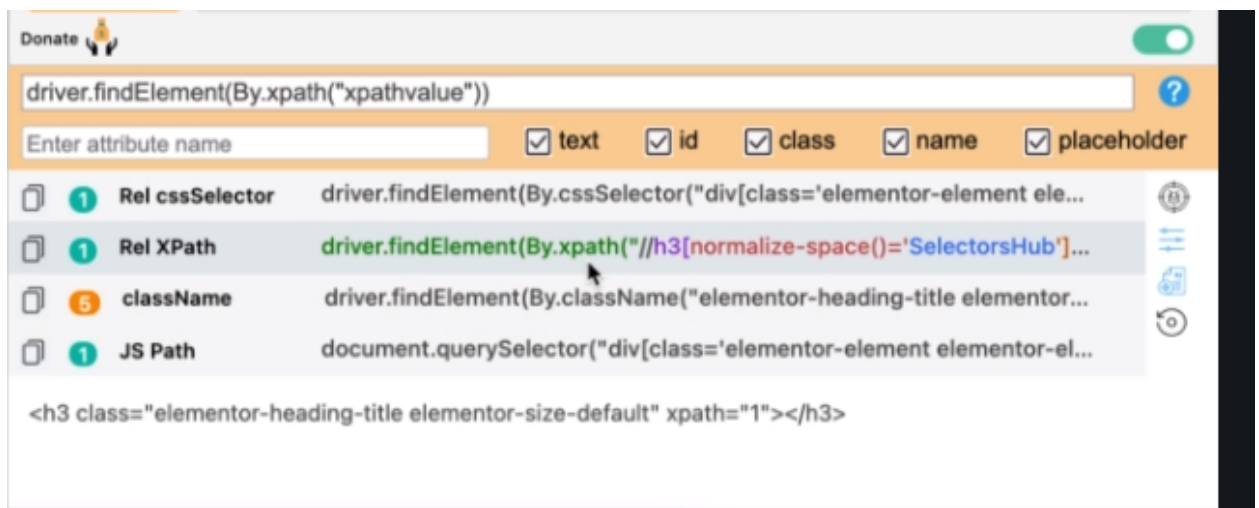
1.

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

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1. **Get text using XPath:**

   a.

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

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1. **To connect:**
    a. https://www.linkedin.com/in/rajat-v-3b0685128/
    b. https://github.com/rajatt95
    c. https://rajatt95.github.io/

THANK YOU!

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