

Sit On Selenium Throne With XPath Functions

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Introduction

The next AUT is GitHub. Let's inspect the Note below Username. Here is a special case where XPath or CSS Selector is our only option and a perfect example, to show you why we should not use Chrome DevTools to copy XPath. Copying an XPath value works sometimes but it is not reliable. Therefore, it's best not to Right click, Copy, and Copy XPath then Paste XPath. Notice the id value. Now, I am going to reload the page. Copy XPath again then paste XPath. Do you see how the value changed after reloading the page? That is called a dynamic id value where the value changes every time. This video will show you how to handle dynamic values using XPath Functions.

XPath Functions

There are 4 kinds of XPath Functions. On Oracle's site. We see Node Set, String, Boolean, and Number. Our focus will be the String Functions. In our cheat sheet, I call them Partial Pattern Match because all we need to do is match part of the Attribute's Value. I was going to demo 3 functions but I will remove ends-with then demo starts-with and contains.

Back to our AUT for the starts-with function. We write 2 forward slashes, Tag Name is p, opening and closing brackets, starts-with, opening and closing parenthesis, at symbol, the Attribute Name is id, comma, 2 single quotes, then write what the value starts with. The value starts with description so let's write description between both quotes. Bingo, there it is. We can also replace starts-with and use the next function contains. Both functions will work because the value starts with description and also contains description. Remove starts-with then add contains. Did you notice, that we have found 1 of 2? 1 of 2 is not good enough if we are looking to only verify the note below Username. Both elements almost look the same. How do we find 1 of 1 when both elements have p as the tagName, class attribute with a value of note, and a dynamic id value?

Recall from the previous session, we used XPath with a Logical AND operator. Let's look at both WebElements. One note refers to the username and the other note refers to the email address. We can use a word or we can use a phrase from the note. Inside the brackets, we write and contains, 2 parentheses, we write a dot, comma, 2 single quotes, within the quotes, we can write the complete phrase This will be your username and so forth. Now, we have 1 of 1. However, I prefer to use a unique word like username and we still have 1 of 1. This query is asking to find "a p tag that starts with an id attribute consisting of a description value and contains text username". We can also replace the dot with the text function. However, there are cases where text will not work. I will create a video explaining the difference between using an XPath value using a dot and using text. We still see 1 of 1. If you choose not to write the word and, you can replace it with the square brackets.

Let's go to Tools QA and continue with a different syntax for the text function. Inspect First name colon. We see a strong tag name but don't see any attributes. Write 2 forward slashes, strong, both brackets, text, 2 parentheses, equal, 2 single quotes, First name colon, and bingo. We found our element. That's it for XPath Functions. You can download the Cheat Sheet and Transcript from github at RexJonesII/Selenium4Beginners and <https://tinyurl.com/SeleniumLocatorsForWebElements>.

Next, is XPath Axes.