**Working with Xpath:**

XPath is defined as XML path. It is a syntax or language for finding any element on the web page using the XML path expression. XPath is used to find the location of any element on a webpage using HTML DOM structure.

**XPath Examples**

There are two types of XPath:

* Absolute XPath
* Relative XPath

**Absolute XPath**

Absolute XPath 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 fails.

The key characteristic of XPath is that it begins with the single forward slash(/) ,which means you can select the element from the root node.

**Absolute XPath**: /html/body/div[1]/div/div[2]/header/div/div[2]/a/img

**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.

You can start from the middle of the HTML DOM structure with no need to write a long XPath.

**Relative XPath:** //\*[@id="block-perfecto-main-menu"]/ul/li[6]/a

**Customize Xpath**

**<input class="input r4 wide mb16 mt8 username" type="email" value="" name="username" id="username" aria-describedby="error" style="display: block;" xpath="1">**

Input = tagName

Arttibutes

Class== input r4 wide mb16 mt8 username

Type== email

Name== username

Id == username

1-//tagName[@arttibutesName=’Value’]

//input[@name=’username’]

**Regular Expression for Xpath**

**1-//tagName[contains(@arttibutesName,’Value’)]**

**2-Using Contains Keyword with Attributes**

http://www.seleniumframework.com/Practiceform/

//button[contains(@onclick,'newAlert()')]

<https://www.jquery-az.com/bootstrap4/demo.php?ex=79.0_1>

//div[contains(@class,'dropdown-menu')]

**3- using text keyword**

//\*[text()='This is a nested element']

**4- using Contains Keyword**

//a[contains(text(),'Find me I have nothing in me!!')]

**5-Using Operator with Xpath and or**

<input type="text" class="validate[required]" placeholder="Name \*" name="name" value="" aria-required="true">

//input[@type='text' and @name='name'] //when you write xpath outside from browser please change the ‘ ‘ in browser just remove and add it back

**Child and Parent Relation Xpath**

1. **Google text box**

//div[@class='RNNXgb']/div/div[2]/input

1. **Saleforce.com**

//div[@class='global-nav-login-flydown global-login']/div/div/div[1]

**Treves back to child element and parent**

http://www.qaclickacademy.com/interview.php

Systex: //\*[@attribute=’ value ‘]/following-sibling::tagname or [] number

//\*[@id='tablist1-tab1']/following-sibling::li[2]

**Going one step back to parent elements**

//\*[@id='tablist1-tab1']/parent::ul

**Working with CSS**

<**input** **class**="input r4 wide mb16 mt8 username" **type**="email" **value**="" **name**="username" **id**="username" aria-describedby="error" **style**="display: block;" **xpath**="1">

**Input** = tagName

**Arttibutes**

**Class**== input r4 wide mb16 mt8 username

**Type**== email

**Name**== username

**Id** == username

**1-tagName[arttibutesName=’Value’]**

**http://www.seleniumframework.com/Practiceform/**

<input type="submit" value="Subscribe">

input[value = ‘Subscribe’]

2-**Selecting by ID**

**#--we are using it for id then the value of id**

Facebook SingUp page

<select name="birthday\_day" id="day" title="Day">Day</option><option select>

In above HTML tag " id="day" we have id with the value of “day” to select id using CSS

**#day**

**3-Selecting by Class Name**

<span class="\_5k\_4" data-type="selectors" data-name="birthday\_wrapper" </span>

For class we use ( . ) dot followed by class name

In above HTML DOM class value is "\_5k\_4"

. "\_5k\_4

**2-Regular Expression**

tagName[attributes\*=’Value’]

<input type="submit" value="Subscribe">

input[value\*= 'Subscribe']

a[href\*='restapitutorial']

**Finding Child elements in css**

https://rahulshettyacademy.com/AutomationPractice/

**1-Getting the child element of table**

Td:nth-child(4)

If you have multiple table in page then you can traverse from parent tag

table[id='product'] td:nth-child(4)

**From the left side table I got third coloum**

.left-align td:nth-child(3)

https://www.seleniumeasy.com/selenium-tutorials/css-selectors-tutorial-for-selenium-with-examples

**What is Cookies in website?**

When you visit a website that uses cookies, a cookie file is saved to your PC, Mac, phone or tablet. It stores the website's name, and also a unique ID that represents you as a user. That way, if you go back to that website again, the website knows you've already been there before.

**What is SearchContext in selenium?**

The SearchContext is a topmost interface present in the Selenium WebDriver hierarchy. It has two methods that will be the abstract as SearchContext is an interface. The two methods are the findElement() and findElements(). The findElement() is used to find the first WebElement that matches the current context.

**What is RemoteWebDriver ?**

Selenium RemoteWebDriver is used to execute the browser automation suite on a remote machine. In other words, RemoteWebDriver is a class that implements the WebDriver interface on the remote server. The browser driver classes like FirefoxDriver, ChromeDriver, InternetExplorerDriver, etc