

CLASSNOTES: DAY 5

Today's Schedule:

- Review:
 - Xpath review
 - Xpath interview questions
 - Xpath new functionalities
 - indexing
 - handle dynamic attribute values
 - how to move from child to parent
 - Tasks shared 1,2,3
 - TestNG introduction
 - Dropdowns
-

- Whats is xpath?
 - XPATH is one of 8 locators of Selenium.
 - XPATH allows us to create custom locators.
 - We can use any attribute and any attribute value to create our own custom locator.
 - Xpath can move from parent to child and child to parent

- How do we move from parent to direct child?
 - We use "/" single slash to move to direct child

```
1- <div id="uh98">
2-   <div>
3-     <a href="https://google.com"> Google 1 </a>
4-   </div>
5-   <div>
6-     <a href="https://google.com"> Google 2 </a>
7-   </div>
8-   <div>
9-     <a href="https://google.com"> Google 3 </a>
10-  </div>
</div>
```

ex#1: write locator returning #2 using "/"

```
//div[@id='uh98']/div
```

ex#2: write locator returning #3 using "/"

```
//div[@id='uh98']/div/a
```

ex#3: write locator returning #5

`//div[@id='uh98']/div --> 1 of 3`

`(//div[@id='uh98']/div)[2] --> This would return us the 2nd div (line #5)`

- How do we move to any child using xpath?

- We use `"//"` double slash to move to any child.

- What does `"//"` means in xpath?

- It means jump to the point I will be giving to you.

- Or start from anywhere.

- Indexing using xpath locator:

- If there are more than 1 matching results for an xpath locator, we can use indexes to select exactly which one we want.

```
<div>
  <a href="https://google.com"> Google 1 </a>
  <a href="https://google.com"> Google 2 </a>
  <a href="https://google.com"> Google 3 </a>
```

```
</div>
```

ex: `//a[@href='https://google.com'] --> this will return me 3 matching results.`

- I can use indexes to select exactly a specific one.

`(//a[@href='https://google.com'])[1] ---> returns Google 1`

`(//a[@href='https://google.com'])[2] ---> returns Google 2`

`(//a[@href='https://google.com'])[3] ---> returns Google 3`

- For xpath indexes start from 1

- How do we move from child to parent?

- We use `"/.."`

- We do not have to provide any tag name when we are moving from child to parent.

- It will automatically move to direct parent

```
1- <div id="uh98">
2-   <div>
3-     <a href="https://google.com"> Google 1 </a>
4-   </div>
5-   <div>
6-     <a href="https://google.com"> Google 2 </a>
```

```

7-    </div>
8-    <div>
9-        <a href="https://google.com"> Google 3 </a>
10-    </div>
11- </div>

```

ex: Locate Google 2 link using its text with xpath

- 1- `//a[.='Google 2']` --> this locator is returning me line 6
- 2- `//a[.='Google 2']/..` --> this locator is returning me line 5
- 3- `//a[.='Google 2']/../..` --> this locator is returning me line 1

```

//E[@A='t']
//tagName[@attribute='value']

```

--> P.I.Q:

- How do you handle dynamic web elements?
- How do you handle web elements with dynamic attribute value?

- Dynamic attribute value: means some part of an attribute value is changing when the page is refreshed.

Answer#1: we use xpath methods: contains, starts-with, and ends-with

- 1- `//tagName[contains(@attribute, 'value')]`
- 2- `//tagName[starts-with(@attribute, 'value')]`
- 3- `//tagName[ends-with(@attribute, 'value')]`

Answer#2: we can also locate a static (stable) parent or child web element, locate that, and move to desired web element.

```

genk12034789102348971234
genk98012731098237102933

```

1 2

```

0ahUKEwj6seyij4L2AhWejYkEHRdZBUMQ39UDCAY
0ahUKEwiY2L7wj4L2AhVzkokEHRqzCo4Q39UDCAY

```

```

//input[contains(@data-ved, '0ahUK')]

```

