

## Session-5 Xpath

Saturday, August 27, 2022 5:40 PM

### BY XPATH

#### What is XPath?

- XPath stands for **XML Path**
- It is a **query language** to locate nodes in XML document
- It gives **complete address of web element**

### BY XPATH

#### How to get XPath of Web Element?

1. Generate automatically using browser plugin
  - Chrome Browser - SelectorsHub
  - FireFox Browser – Firepath, Chropath
2. Write XPath manually

#### Different ways & methods for writing XPath

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SESSION # 5  
LOCATORS (PART-3)  
BY XPATH

Absolute XPath

Relative XPath

Single Attribute

Multiple Attribute

AND

OR

contains()

starts\_with()

text()

position()

Last()

#### Absolute XPath

- ▶ Begins from the **root** of the element to be located.

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## SESSION # 5

## LOCATORS (PART-3)

## BY XPATH

- ▶ starts with the / symbol
- ▶ Example -  
Webpage - <https://www.saucedemo.com/>  
Web Element - username  
/html[1]/body[1]/div[1]/div[1]/div[2]/div[1]/div[1]  
/div[1]/form[1]/div[1]/input[1]

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RT-3)

**Relative XPath**

- ▶ A relative XPath begins from the element to be located and not from the root.
- ▶ starts with the // symbol
- ▶ Syntax  
XPath - //tagname[@attribute name='attribute value']

**XPath – using single attribute**

```
//<HTML tag>[@attribute_name='attribute_value']
```

OR

```
//*[ @attribute_name='attribute_value']
```

**XPath – using multiple attribute**

```
//<HTML tag>[@attribute_name1='attribute_value1']  
[@attribute_name2='attribute_value2']
```

OR

```
//*[ @attribute_name1='attribute_value1']  
[@attribute_name2='attribute_value2']
```

Note: '\*\*' after double slash is to match any tag with the desired text.

```
//input[@id="user-name"][@name="user-name"]
```

**XPath – using And expression**

```
//<HTML tag>[@attribute_name1='attribute_value1'  
and @attribute_name2='attribute_value2']
```

OR

Condition-2

Condition-1

```
//*[ @attribute_name1='attribute_value1' and @attribute_name2='attribute_value2']
```

**XPath – using OR expression**

```
//<HTML tag>[@attribute_name1='attribute_value1' or  
@attribute_name2='attribute_value2']
```

OR

Condition-2

Condition-1

```
//*[ @attribute_name1='attribute_value1' or @attribute_name2='attribute_value2']
```

Note: '\*\*' after double slash is to match any tag with the desired

Note: after double slash is to match any tag with the desired text.

### XPath – using contains()

Contains() method helps in locating the UI element using partial text.

#### Syntax

```
//<HTML tag>[contains(@attribute_name,'attribute_value')]
```

OR

```
//*[contains(@attribute_name,'attribute_value')]
```

Note: '\*\*' after double slash is to match any tag with the desired text.

### XPath – using starts-with

```
//<HTMLtag>[starts-with(@attribute_name,'attribute_value')]
```

OR

```
//*[starts-with(@attribute_name,'attribute_value')]
```

Example –

- Id=" message12"
- Id=" message345"
- Id=" message8769"

### XPath – using position()

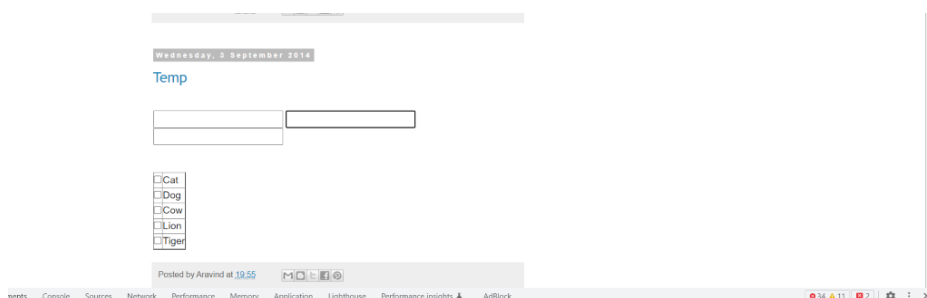
```
//tag-name[@attribute-type='attribute-value'][position()=value]
```

### XPath – using last()

```
//tag-name[@attribute-type='attribute-value'][last()]
```

```
//input[@type='text'][last()]
```

<https://only-testing-blog.blogspot.com/>



Position:- //input[@type='text'][position()=2]

Last:- //input[@type='text'][last()]

# Frequently Asked Interview Questions

## Q1. What are locators

Locators help Selenium in finding the UI elements on the Web Page. We can use these locators in the Test Automation code for locating the UI elements on the web pages

## Q2. What are the different types of locators that can be used in Selenium

The following are the different types of locators we can use in Selenium:

- By ID
- By Name
- By Class Name
- By Tag name
- By Link Text or By Partial Link Text
- By CSS Selectors
- By XPath Expressions

## Q3. Difference between findElement() and findElements() method

### findElement()

0 matches: throws exception (org.openqa.selenium.NoSuchElementException)

1 match: returns WebElement instance

2+ matches: returns only first appearance in DOM

### findElements()

0 matches: returns an empty list

1 match: returns list of 1 WebElement instance

2+ matches: returns list with all matching instances

## Q4. How to click on a hyperlink in Selenium?

Hyperlinks can be located using **By.linkText** or **By.partialLinkText** locator

```
driver.findElement(By.linkText("Complete Link Text")).click();
```

```
driver.findElement(By.partialLinkText("Partial Link Text")).click();
```

## Q5. Difference between absolute XPath and relative Xpath

Absolute XPath - It starts with the root node or a forward slash (/)

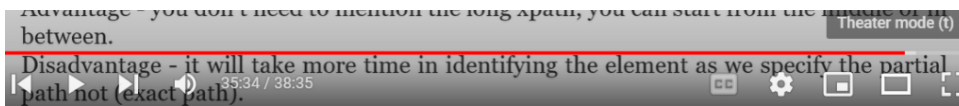
Advantage - it identifies the element very fast.

Disadvantage - If any thing goes wrong like some other tag added or removed in between, then this path will no longer works.

Relative Xpath - It starts from the node of your choice or the web element we want to locate. It doesn't start from the root node.

It starts with Double forward slash(//)

Advantage - you don't need to mention the long xpath, you can start from the middle or in-



Q5. How we can retrieve the dynamically changing attribute value

Use Relative XPath using contains or starts with text method

Q6. An element has an id "bng\_123" but its number is changing. How to handle it

Use Relative XPath using contains or starts with text

XPath - //input[contains(@id, 'bng')]

Q 7. How to list total no. of web elements on web page

```
List<WebElement> allElements = driver.findElements(By.xpath("//*"));
```

```
int totalWebElements = allElements.size();
```

```
System.out.println("Total WebElements: " + totalWebElements);
```