

# DAY 3- Locators Introduction

Agenda:

- Understanding WebElements
- Finding WebElement using locators
  - id,name,classname,linktext,partiallinktext,tagname,xpath,css
- findElement(), findElements(), sendKeys() methods

## DAY 3: Warm Up

Write 3 things you learned from the last selenium class? Share from the live chat.

- `driver.navigate().refresh();`
- `driver.navigate().forward();`
- `driver.manage().window().maximize();`
- `driver.quit` and `driver.close`
- `verify title`
- `verify url`

# LOCATORS

There are **8 selenium** locators to locate an element.

1. id
2. name
3. className
4. tagName
5. linkText
6. partialLinkText
7. xpath->There are multiple ways to write xpath
8. css->There are multiple ways to write css

# LOCATORS

Finding Elements by Locators : There are 8 locators

1. By.id `=>driver.findElement(By.id(""));`
2. By.name `=>driver.findElement(By.name(""));`
3. By.className `=>driver.findElement(By.className(""));`
4. By.tagName `=>driver.findElement(By.tagName(""));`
5. By.linkText `=>driver.findElement(By.linkText(""));`
6. By.partialLinkText `=>driver.findElement(By.partialLinkText(""));`
7. By.xpath `=>driver.findElement(By.xpath(""));`
8. By.css `=>driver.findElement(By.css(""));`

# Class Work: Log in Test

1. Create a class : LocatorsIntro
2. Create main method and complete the following task.
  - a. When user goes to [http://a.testaddressbook.com/sign\\_in](http://a.testaddressbook.com/sign_in)
  - b. Locate the elements of email textbox,password textbox, and signin button
  - c. Enter below username and password then click sign in button
    - i. Username : [testtechproed@gmail.com](mailto:testtechproed@gmail.com)
    - ii. Password : Test1234!
  - d. Then verify that the expected user id [testtechproed@gmail.com](mailto:testtechproed@gmail.com)
  - e. Verify the Addresses and Sign Out texts are displayed
  - f. Find the number of total link on the page
  - g. Sign out from the page

# Class Work: Google Search Test

1. Create a new class : `GoogleSearchTest`

2. Create main method and complete the following task.

- When user goes to <https://www.google.com/>
- Search for “porcelain teapot”
- And print how many related results displayed on Google
- And click on Shopping
- Then click on the first result

# 1. By.id() method

```
<a id="sign-in" class="nav-item nav-link" data-test="sign-in" href="/sign_in">Sign in</a>
```

**WebElement sessionEmail=driver.findElement(By.id("sign-in"));**

- id is usually unique and commonly used to locate an element.
- Use this whenever available and unique
- If you pass the wrong id value then you get NoSuchElementException

## 2. By.name() method

```
<input class="form-control" placeholder="Password" data-test="password" type="password" name="session[password]" id="session_password">
```

**WebElement sessionPassword=driver.findElement(By.name("session[password]"));**

- If the name and the value is unique you can also use this.



### 3. By.className() method

```
<input class="form-control" placeholder="Password" data-test="password" type="password" name="session[password]" id="session_password">
```

***WebElement sessionPassword=driver.findElement(By.className("form-control"));***

- This can be used when you have class attribute.
- If class value pair unique then this can be used.

# By.linkText() method

```
<a class="nav-item nav-link" data-test="addresses" href="/addresses">Addresses</a>
```

```
WebElement welcomeMessage=driver.findElement(By.linkText("Addresses"));
```

- This can only be used to identify the HTML links.
- The HTML link elements are represented on a webpage using <a> tag, an abbreviation of anchor tag.
- You can easily recognize the hyperlinks on the UI and then can use this method
- The is case sensitive and has to match with the link text

# By.partialLinkText() method

```
<a class="nav-item nav-link" data-test="addresses" href="/addresses">Addresses</a>
```

```
WebElement welcomeMessage=driver.findElement(By.partialLinkText("Addr"));
```

- Similar to linkText() method.
- The only difference is you can don't have to give the exact text.
- You can only give a certain part of the text.
- When you give the whole text it will accept too.

# By.tagName() method

```
<input class="form-control" placeholder="Password" data-test="password" type="password" name="session[password]" id="session_password">
```

```
WebElement sessionPassword=driver.findElement(By.tagName("input"));
```

- This is slightly different that the other locators.
- When you pass a certain tag like <div>,<a>,<input>,... it will return multiple element since you might have multiple same name tag. For this reason it is mostly use to get a list of element. So it is recommended to use with findElements() method.
- For example to return all of the links on a page we use :
  - List<WebElement> linksOnThePage=driver.findElements(By.tagName("a")); //interview question
- To get all iframes
  - List<WebElement> allFrames=driver.findElements(By.tagName("iframe")).size();
- For example to identify total number of iframes
  - Int size = driver.findElements(By.tagName("iframe")).size();

# findElement() method

```
WebElement elementName=driver.findElement(By.LocatorStrategy("LocatorValue"));
```

- To find an element, we use findElement() method.
- **This returns one single webelement**
- If driver doesn't find the element, it throws a runtime exception : **NoSuchElementException**.
- When you see NoSuchElementException, then check your locator again.



## findElements() method

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```
List<WebElement> elementName = driver.findElement(By.LocatorStrategy("LocatorValue")) ;
```

- **Returns a list of web elements**
- Returns an empty list if there are no web elements matching the locator strategy.
- Doesn't throw exception.
- Each Web element is indexed with a number starting from 0 just like an array



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# QUESTION

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What is the difference between findElement and findElements in selenium?



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