Rex Jones II

Selenium 4
Relative Locators

Selenium 4 Video Playlist
https://www.youtube.com/playlist?list=PLfp-cJ6BH8u_4AMzeLVizVfqn4SCywSTJ

Selenium 4 provides 5 Relative Locators to find an element or elements located above(), below(), near(), toLeftOf(), and toRightOf() another element.

In this session, we will use TestProject's website. It's a free E2E test automation platform for web, mobile, and API. If you are interested in more videos, you can subscribe to my YouTube channel and click the bell icon. Also connect with me on LinkedIn, Facebook, and follow me on Twitter. Lately, I have been slow creating my transcripts but I will make sure to place them on GitHub.

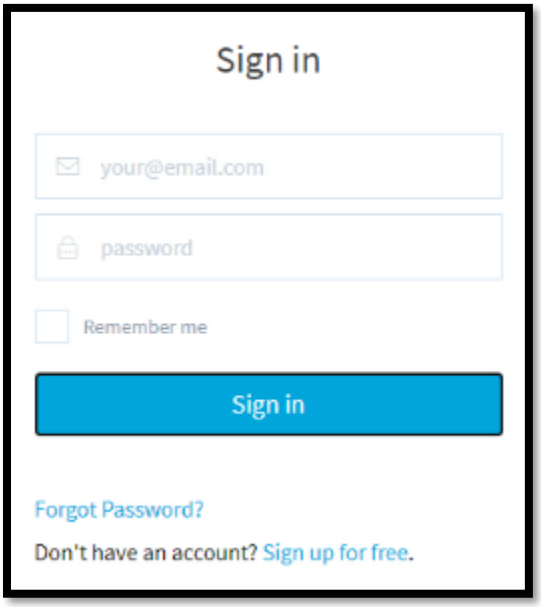
Okay, let's go ahead and get straight to the point. Relative Locators were formerly called Friendly Locators. The TestNG Configuration methods BeforeMethod and AfterMethod are pre-written. BeforeMethod will set up our test and AfterMethod will tear down our test.

```
WebDriver driver;

@BeforeMethod
public void setUp () {
  WebDriverManager.chromedriver().setup();
  driver = new ChromeDriver();
  driver.manage().timeouts().implicitlyWait( time: 5, TimeUnit.SECONDS);
  driver.manage().window().maximize();
}
```

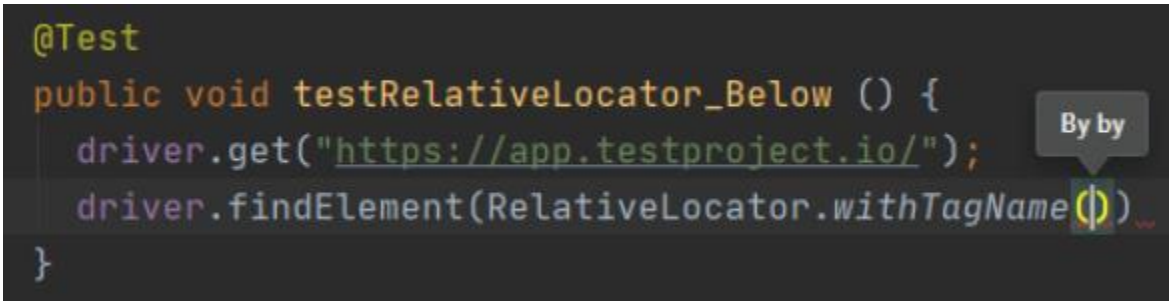
```
@AfterMethod
public void tearDown () {
  driver.quit();
}
```

Our Test Script is testRelativeLocator_Below. It will find the Sign In button then click the Forgot Password link below the Sign In button.



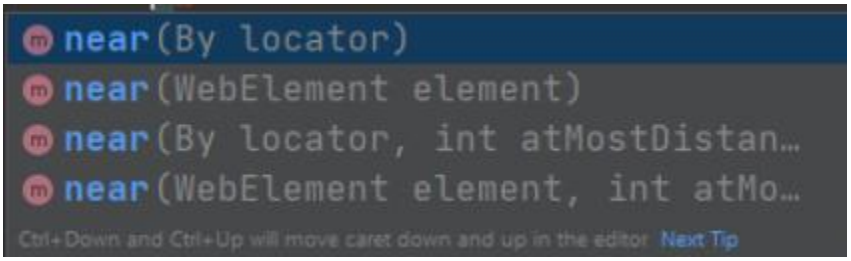
Let's inspect the Sign In button and we see the value for id is tp-sign-in. Inspect the Forgot Password link and we see the value for the Tag Name is 'a' is the tagName. 'a' is for hyperlink. That's all we need to click the Forgot Password link.

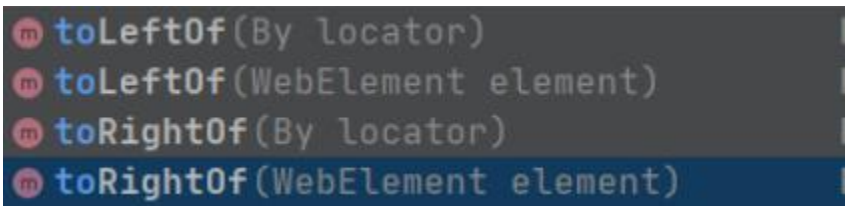
There are 2 ways to write a Relative Locator. We start by writing driver.findElement(RelativeLocator.withTagName) and the other way is to bypass writing RelativeLocator and to start by using withTagName. Import.



However, there's a difference with the import statements. To use withTagName without writing Relative Locator, we import the package with static. If you want to use the other way with Relative Locator.withTagName. It's the other package without static. By default, Eclipse does not import the static package.

The tagName for Forgot Password is "a" so we enter "a" dot. Here's a list of our Relative Locators. I want you to notice something. Each Relative Locator is overloaded with more than 1 option: above has a By locator parameter and a WebElement element parameter, the same with below: By locator, WebElement element, near is the only locator with 4 options (By locator, WebElement element, By locator, int atMostDistanceInPixels, and WebElement element), int atMostDistanceInPixels), toLeftOf has a (By locator and WebElement element_, the same with toRightOf (By locator and WebElement element).





Right now, we are trying to find the Forgot Password link which has a tagName of "a" and located below the Sign In button so we select below with a By locator parameter. We write the locator for the Sign In button: By.id("tp-sign-in")). Now, we can also do 1 more thing after entering the value for id. When it comes to a link Forgot Password, next is to click the Password link. If you wanted to, you can also use WebElement by writing WebElement signInButton = driver.findElement(By.id("tp-sign-in")). Next, we pass in signInButton. Either way is okay. Now we have the Forgot Password link and we are clicking the Password link. Next, let's go ahead and see if we actually land on the next page. Go back to the AUT and click the Forgot Password link and to verify we landed on the Forgot Password. We are going to inspect

Reset Password and it has an id value of tp-title. If we wanted to, we can also use an assert statement but I want to make sure a statement is printed to the Console. Relative Locators can be good for dynamic elements. Dynamic elements are elements like tp-title that changes every time but in this case the value is not dynamic. If the value changes but the tagName remains the same then that's a good reason to use Relative Locator.

Write String title = driver.findElement(By.id("tp-title")).getText());
sysout("Title: " + title)

```
@Test
public void testRelativeLocator_Below () {
  driver.get("https://app.testproject.io/");
  WebElement signInButton = driver.findElement(By.id("tp-sign-in"));

  driver.findElement(withTagName("a").below(signInButton)).click();
  String title = driver.findElement(By.id("tp-title")).getText();
  System.out.println("Title: " + title);

}
```

Let's Run. Bingo Title = Reset Password.

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