

Selenium 4 Open, Switch & Work In New Tab

Selenium 4 Video Playlist

https://www.youtube.com/playlist?list=PLfp-cJ6BH8u_4AMzeLVizVfqn4SCywSTJ

Our steps for opening, switching, working, and switching back to the parent is to access this Home page of this Automation Practice site then open the Sign In page in the new tab. On the Sign In page, we will work in this tab by entering an email address then clicking the Create An Account button. We are not going to perform any actions to create an account but switch back to the parent tab and start shopping.

Let's start our test by writing @Test / public void testOpenSwitchWorkInNewTab () {} then some comments as our steps. // Open & Switch To New Window-Tab
// Work In The New Window-Tab // Get The Window ID Handles // Switch Back To The Parent Window-Tab & Work In The 1st Window-Tab.

```
@Test
Run | Debug
public void testOpenSwitchWorkInNewTab () {

    // Open & Switch To New Window-Tab

    // Work In The New Window-Tab

    // Get The Window ID Handles

    // Switch Back To The Parent Window-Tab & Work In The 1st Window-Tab
}
```

First Step: We are going to Open & Switch To The New Window-Tab, we write `driver.switchTo().newWindow(WindowType.TAB).get("http://automationpractice.com/index.php?controller=authentication&back=my-account")`; Paste the URL. Since this URL is so long, we can place the get method on the next line my hitting enter after the dot. You can also end the previous line with a semi-colon and start the next line with `driver.get`. However, I'm going to remove the semi-colon and `driver`. It's still long. But let's print the title `sysout("Title: " + driver.getTitle());`

```
// Open & Switch To New Window-Tab
driver.switchTo().newWindow(WindowType.TAB).
get("http://automationpractice.com/index.php?controller=authentication&back=my-account");
System.out.println("Title: " + driver.getTitle());
```

Now, let's work in the new tab. Go back to the AUT and inspect both elements. Email address has email_create as the id value and the button has SubmitCreate as the id value. Capital S and Capital C. Okay, for the email we write
 driver.findElement(By.id("email_create")).sendKeys("Automation34@Selenium4.com"); then
 driver.findElement(By.id("SubmitCreate")).click(); for the button.

```
// Work In The New Window-Tab
driver.findElement(By.id("email_create")).sendKeys("Automation34@Selenium4.com");
driver.findElement(By.id("SubmitCreate")).click();
```

We are finished working in the new tab. At this point, you can decide to close the new tab or leave it open. If you close the tab, make sure to use driver.close and not driver.quit. driver.close will close the new window but driver.quit will quit the driver and close both windows. [Video 18](#) that will show you the difference between close and quit.

Now, let's get the Window Handles of each tab. The Window Handle is an alphanumeric id assigned to each window or each tab. Set <String> allWindows = driver.getWindowHandles() and we 2 methods. The getWindowHandle method returns 1 window id handle. getWindowHandles method return a set of window handles that can be used to iterate over all open windows. Select this method. The next method is to return an Iterator for the collection of both Window ID's. <String> iterate = allWindows.iterator(); We need a way to iterate the collection of elements and next() is a method for returning an element. String parentFirstWindow = is the parent tab and first element in the iteration. iterate dot is the next() element which is String childSecondWindow = and that window is the new tab we are going to open. For this example, that's all we need to get the ID's and iterate the ID's. You can also loop through the windows.

```
// Get The Window ID Handles
Set <String> allWindows = driver.getWindowHandles();
Iterator<String> iterate = allWindows.iterator();
String parentFirstWindow = iterate.next();
String childSecondWindow = iterate.next();
```

The last step is to switch back to the parent. Let's write `driver.switchTo().window()`. Let me explain this part. Do you see `window` and `newWindow`? Both methods involve switching focus to a window but the `window()` method deals with handling a window and the `newWindow()` method opens a window. The `window()` method receives a name or handle. We get the name or handle information after using the `getWindowHandle` method or `getWindowHandles` method. There's a difference between handling the window and opening the window. I created [video 71](#) that provide more details on how to handle the windows. In that video, I used all 3 methods: `getWindowHandle`, `getWindowHandles`, and `driver.switchTo().window()`.

Right now, we are opening a new window then working in the window which is a benefit because it allows us to multi-task in a different tab. Before Selenium 4, we could not multi-task but had to perform a different task in the same tab. Select window then pass in `parentFirstWindow` because we are switching back to the parent. Let's go to the AUT and inspect the Search box. We see id is `search_query_top` and the search icon has no id value but a value of `submit_search` for name.

Let's enter some data by writing `driver.findElement(By.id("search_query_top")).sendKeys("Faded Shirt");` and click the search icon by writing `driver.findElement(By.name("submit_search")).click();` Also print the page title.

`sysout("Title: " + driver.getTitle());`

```
// Switch Back To The Parent Window-Tab & Work In The 1st Window-Tab
driver.switchTo().window(parentFirstWindow);
driver.findElement(By.id("search_query_top")).sendKeys("Faded Shirt");
driver.findElement(By.name("submit_search")).click();
System.out.println("Title: " + driver.getTitle());
```

Let's Run. The reason why I like to print the title because I want to make sure we can see the page title for each page in the console. We see both tabs had some kind of information. The parent tab has Faded Shirt and the new tab is ready to create an account with our Email Address already populated.

Let's see if the console shows each page title. The console shows all 3 titles: My Store, Login – My Store, and Search – My Store. Bingo – Thanks for watching.

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