

06-03-2016

Handling FILE DOWNLOAD Pop-up

Characteristics: When we click on the download link. It will display a pop up in firefox browser. We cannot inspect the pop-up, but we can move it. Pop-up will have 2 radio buttons.

1> open with

2> save file .

Solution: To handle file download pop-up, we use setPreference() method of FirefoxProfile class. It is overloaded and takes two argument such as key & value. Key is always string and value can be boolean, int or string. To get the details about key and value, we should refer following link.

⇒ http://kb.mozillazine.org/Firefox:_FAQs:_About:config-Entries

```
PSVM (String[] args) {  
    String gkey = " ";  
    String gvalue = " ";  
    System.setProperty(gkey, gvalue);  
    FirefoxProfile profile = new FirefoxProfile();  
    //download location is Desktop(0), Downloads(1), others(2)  
    profile.setPreference("browser.download.folderlist", 0);  
    //if file is zip dont display pop-up save it directly.  
    profile.setPreference("browser.helperApps.neverAsk.saveToDisk",  
        "application/zip");  
    //open the browser with above settings  
    WebDriver driver = new FirefoxDriver(profile);  
    driver.get("http://www.seleniumhq.org/download/");  
    String xp = "//td[.= Java]/..//td[4]/a";  
    driver.findElement(By.xpath(xp)).click();  
}
```

Target path to save file:

```
profile.setPreference("browser.download.folderlist", 2);  
profile.setPreference("browser.download.dir", "d:");
```

* Handling Child Browser Pop-up

Characteristics:

- 1) We can inspect the pop.
- 2) We can move the pop-up
- 3) We have minimize & maximize button also.
- 4) Colourful.
- 5) It may contain address bar.

Q What is the difference between getWindowHandles() and getWindowHandles()?

→ getWindowHandle() returns windowhandle of current browser (String), whereas getWindowHandles of all the browsers (Set<String>)

Q. Write a script to count the no of browsers opened by Selenium & also print window handle of all browsers opened.

```
PSVM (String[] args) {  
    System.setProperty ("", "");  
    driver.get ("http://www.naukri.com/");  
    Set<String> allWH = driver.getWindowHandles();  
    int count = allWH.size();  
    S.O.P (count);  
    for (String wh: allWH)  
    { S.O.P (wh); }  
}
```

O/P: 4

13

27

37

47

Q What is the difference between close() & quit()?

→ close() = closes the current browser

→ quit() = closes all the browsers.

BQ Write a script to close all the browsers without using quit().

```
PSVM (String[] args) {  
    System.setProperty ("", "");  
    WebDriver driver = new FirefoxDriver();  
    driver.get ("https://www.naukri.com");  
    Set<String> allWH = driver.getWindowHandles();  
    for (String wh: allWH) {  
        driver.switchTo().window(wh);  
        driver.close();  
    }  
}
```

Assign Write a script to print title of all browsers.

Assign Write a script to close only parent browser.

Assign Write a script to close only child browser.

Assign Write a script to close specified Browser. Gr. Amazon.

```
PSVM (String[] args) {  
    System.setProperty ("", "");  
    WebDriver driver = new FirefoxDriver();  
    String parent = driver.getWindowHandle();  
    driver.get ("http://www.naukri.com");  
    Set<String> allWH = driver.getWindowHandles();  
    allWH.remove (parent);  
    for (String wh: allWH) {  
        driver.switchTo().window(wh); driver.close();  
    } }
```

Q: How to handle newtab in Selenium?

→ To handle newtab in Selenium, we use getWindowHandles() and driver.switchTo().window statement.

→ In selenium, there is no statement called switchToTab. Let me click on the link manually, it opens the page in newtab, whereas on the same link, when selenium clicks it opens the page in new window, so that we use switchTo() statement.

→ PSVM (String[] args) {

```
System.outproperty (" ", " ");
```

```
driver.manage().timeouts.implicitlyWait(10, TimeUnit.SECONDS);
```

```
driver.findElement(By.linkText("actitime Inc.")).click();
```

```
Set<String> allWH = driver.getWindowHandles();
```

```
for (String wh : allWH) {
```

```
    driver.switchTo().window(wh); }
```

```
WebElement link = driver.findElement(By.linkText("ToyFree"));
```

```
WebDriverWait wait = new WebDriverWait(driver, 10);
```

```
wait.until(ExpectedConditions.visibilityOf(link));
```

```
link.click();
```

```
}
```

NOTE: In Google Chrome Browser, it opens the link in newtab itself of new window; and we handle it using switch to window itself.

* Window Pop-up:

Characteristics: If the pop-up displayed on the application is

a) not alert & confirmation

b) Not hidden division

↳ File Upload / Download

↳ Child Browser pop-up, then we call it as a window pop-up.

Some of the window pop-ups, cannot be moved, but we cannot inspect any of the window pop-up.

In selenium, there is no option to handle window pop-ups hence, we use some other automation tool., such as AutoIT

AutoIT is a free window based application automation tool.

It supports coding language Visual Basic Scripting (VBS).

We can download AutoIT setup file from following location -

URL: <https://www.autoitscript.com/site/autoit/downloads/>

File: autoit-v3-setup.exe

Installation: After downloading, double click, Next > Next > Finish

Automating Calculator:

→ Inspecting calc.

* Go to Start → All programs → AutoIT → AutoIT Window Info(x64)

* Drag & drop finder tool on the required element.

* We get the details of the object such as class, instance

(* In selenium it is called element, In AutoIT is called as control) id, position, size etc.

→ Writing Script :-

* Go to Start → All programs → AutoIT → Select SciTE Script Editor.

* Write the code.

* Refer to the code on next page.

```
* Run ("c:\windows\system32\calc.exe")  
WinWaitActive ("calculator")  
Sleep (1000)  
Send ("3")  
Sleep (1000)  
Send (" - ")  
Sleep (1000)  
Send ("2")  
Sleep (1000)  
Send ("{ENTER}")  
Sleep (1000)  
WinClose ("calculator")
```

* Go to file Select 'Save'

- * Navigate to the file ^{need to be} saved location, specify the file name and click save.
file extension will be ".au3".
- * Go to Tools > Compile. → It generates ".exe" file in the same location & same name. where the source file is present.
- * Double click on the ".exe" file to execute it.

To run '.exe' file from Selenium, we use exec() method of Runtime class

```
P S V M (String[] args) throws IOException {  
    Runtime run = Runtime.getRuntime();  
    run.exec("d:\\" MyCalcScript.exe");  
}
```

* Automate following Scenarios :-

- 1) Open the Browser
- 2) Enter the URL
- 3) Press "ctrl+p", so that print pop-up is displayed.
- 4) Activate the Print Pop-up.
- 5) Press Enter.

`PSVM (String[] args) throws IOException {`

`System.setProperty(" ", "");`

`WebDrives driver = new FirefoxWebDriver();`

`driver.get("http://localhost/login.do");`

`driver.findElement(By.id("username")).sendKeys(Keys.CONTROL + "p");`

`Runtime run = Runtime.getRuntime(); run.exec("d:\print.exe");`

AutoIT Script (print.exe)

WinWaitActive ("Print")

Sleep(1000)

Send ("{ENTER}")

08-03-2017

	POPUP	INSPECT?	MOVE?	OTHER?	SOLUTION
1) Alert &	Alert				<code>driver.switchTo().alert()</code>
2) Confirmation	X		✓	Δ②	<code>getText(), accept, dismiss</code>
3) Hidden					
4) division	✓		X	Colorful	<code>findElement</code>
5) File upload	X		✓	[Browse...]	<code>sendKeys(path)</code>
6) File Download	X		✓	• openwith • Savefile	<code>SetPreference</code>
7) Child Browser	✓		✓	-	<code>allWindowHandles</code>
8) Window	X		MayBe	Min/Max	<code>driver.switchTo().window(wk)</code>
				---	AutoIT

T.Q How to click on a button, without using click() method?

→ By pressing 'ENTER' key.

```
PSVM (String[] args) {  
    System.setProperty(GECKO_KEY, GECKO_VALUE);  
    WebDriver driver = new FirefoxDriver();  
    driver.get("http://localhost/login.do");  
    WebElement loginbutton = driver.findElement(By.id("loginbutton"));  
    loginbutton.sendKeys(Keys.ENTER);  
}
```

} ↳ Enumerator

Q: How do you copy paste the value present in the textBox into another textBox.

Sample Webpage: demo.html

```
t1: <input type="text" id="t1" value="abc"> <br>  
t2: <input type="text" id="t2">
```

⇒ file:///D:/demo.html

t1:

t2:

⇒ Open the Browser

```
System.setProperty(" ", " ");
```

```
WebDriver driver = new FirefoxDriver();
```

⇒ Enter the URL

```
driver.get("file:///D:/demo.html");
```

⇒ Find t1 textBox

```
WebElement t1 = driver.findElement(By.id("t1"));
```

⇒ Find t₂ textbox

Webdriver.findElement(By.id("t₂"));

⇒ ~~driver~~ press CONTROL+A & CTRL+C

a.sendKeys(Keys.CONTROL + "a"); a.sendKeys(Keys.CONTROL + "c");

⇒ press control+V

a.sendKeys(Keys.CONTROL + "v");

→ Can also be written as

a.sendKeys(Keys.CONTROL + "ac");

Q. Write a script to clear the value present in the textbox without using clear() method.

1) Open the Browser

System.setProperty(" ", " ");

WebDriver driver = new FirefoxDriver();

2) Enter the URL

driver.get("file:///D:/demo.html");

3) find t₁ textbox

WebElement driver.findElement(By.id("t₁"));

4) Press Ctrl+A

a.sendKeys(Keys.CONTROL + "a");

5) Press Delete

a.sendKeys(Keys.DELETE);

Q: How do you copy paste value present in the textbox into another textbox without using shortcut.

```
PSVM (String[] args) {  
    System.setProperty ("", "");  
    WebDriver driver = new FirefoxDriver();  
    driver.get ("file:///D:/demo.html");  
    WebElement t1 = driver.findElement(By.id ("t1"));  
    WebElement t2 = driver.findElement(By.id ("t2"));  
    String v = t1.getAttribute ("value");  
    t2.sendKeys (v);  
}
```

Q: How do you delete the last but one character in a textbox.

```
WE t1 = driver.findElement(By.id ("t1"));  
t1.sendKeys (Keys.LEFT);  
t1.sendKeys (Keys.BACK_SPACE);
```

Q: Write a script to clear the value present in the textbox using back space.

```
WE t1 = driver.findElement(By.id ("t1"));  
String v = t1.getAttribute ("value");  
int l = v.length();  
System.out.println ("No of characters : " + l);  
for (int i=1; i<=l; i++) {  
    t1.sendKeys (Keys.BACK_SPACE);
```

Handling the Frames:

Webpage present in another webpage is called as Embedded webpage. To create embedded webpage, developer uses iframe tag. E.g. page1.html

```
<iframe name = "n1" id = "f1" src = "page2.html"></iframe>  
<br>
```

```
t2: <input type = "text" id = "t2">
```

page2.html

```
t1: <input type = "text" id = "t1">
```

When we right click on the element which is inside the frame, It will display 'this frame' in the context menu.

If the element is inside the frame, we should switch to the frame using following statement

```
driver.switchTo().frame(arg);
```

Frame() method is overloaded; it takes any one of the following arguments:

- 1) Index (int)
- 2) ID (String)
- 3) Address (WebElement).

In order to come out of the frame, we use switchTo() defaultContent() statement. We can also use switchTo() parent frame statement

```
PS VM (String[] args) {  
    System.setProperty("", "");  
    WebDriver driver = new FirefoxDriver();  
    driver.get("file:///110/page1.html");  
    driver.switchTo().frame(0);  
    driver.findElement(By.id("t1")).sendKeys("abc");  
    driver.switchTo().defaultContent();  
    // driver.switchTo().parentFrame();  
    driver.findElement(By.id("t2")).sendKeys("abc");  
}
```

Assign Write a script to login to zoho CRM application.

<https://www.zoho.com/crm/lp/login.html>.