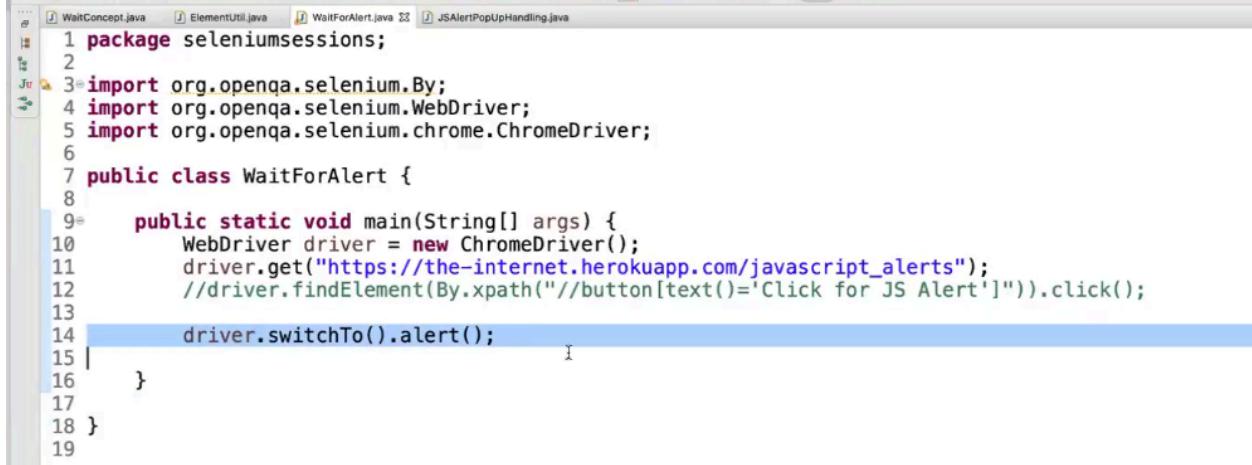
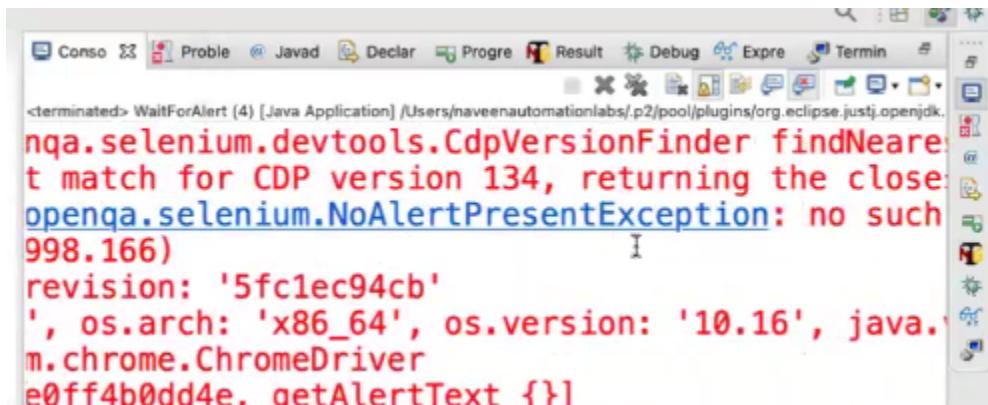


We didnt click on alert and trying to handle alert-
Just to see if we get error in output.



```
1 package seleniumsessions;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.chrome.ChromeDriver;
6
7 public class WaitForAlert {
8
9     public static void main(String[] args) {
10         WebDriver driver = new ChromeDriver();
11         driver.get("https://the-internet.herokuapp.com/javascript_alerts");
12         //driver.findElement(By.xpath("//button[text()='Click for JS Alert']")).click();
13
14         driver.switchTo().alert();           I
15     }
16
17 }
18
19
```



```
<terminated> WaitForAlert [4] [Java Application] /Users/naveenautomationlabs/.p2/pool/plugins/org.eclipse.justj.openjdk.java.nqa.selenium.devtools.CdpVersionFinder findNearest match for CDP version 134, returning the closest openqa.selenium.NoAlertPresentException: no such 998.166)
revision: '5fc1ec94cb'
', os.arch: 'x86_64', os.version: '10.16', java. m.chrome.ChromeDriver
e0ff4b0dd4e. aetAlertText {}]
```

If alert comes after some time, maybe after 20 seconds or so then also we will get same exception. Until method changes the return type based on what type of webelement it is. For alert it returns alert.

```

13
14  public static void main(String[] args) {
15      WebDriver driver = new ChromeDriver();
16      driver.get("https://the-internet.herokuapp.com/javascript_alerts");
17      driver.findElement(By.xpath("//button[text()='Click for JS Alert']")).click();
18
19      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
20      Alert alert = wait.until(ExpectedConditions.alertIsPresent());
21      System.out.println(alert.getText());
22      alert.accept();
23
24  }

```

the-internet.herokuapp.com/javascript_alerts

Chrome is being controlled by automated test software.

JavaScript Alerts

Here are some examples of different JavaScript alerts which can be troublesome for automation

Click for JS Alert

Click for JS Confirm

Click for JS Prompt

Result:

You successfully clicked an alert

```

Console Problem Javadoc Declara P
<terminated> WaitForAlert [4] [Java Application] /Users/na
Apr 01, 2025 8:38:21 AM
WARNING: Unable to find
I am a JS Alert
|   |

```

Create utility-
In same class.
All alert handling methods written

```

26
27  public static Alert waitForAlert(int timeOut) {
28      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
29      return wait.until(ExpectedConditions.alertIsPresent());
30  }
31
32  public static void acceptAlert(int timeOut) {
33      waitForAlert(timeOut).accept();
34  }
35
36  public static void dismissAlert(int timeOut) {
37      waitForAlert(timeOut).dismiss();
38  }
39
40  public static void getTextAlert(int timeOut) {
41      waitForAlert(timeOut).getText();
42  }
43
44  public static void sendKeysAlert(int timeOut, String value) {
45      waitForAlert(timeOut).sendKeys(value);
46  }
47

```

Move to element util-

```

402 //*****wait for alert(JS POP)*****/
403 public Alert waitForAlert(int timeOut) {
404     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
405     return wait.until(ExpectedConditions.alertIsPresent());
406 }
407
408
409 public void acceptAlert(int timeOut) {
410     waitForAlert(timeOut).accept();
411 }
412
413 public void dismissAlert(int timeOut) {
414     waitForAlert(timeOut).dismiss();
415 }
416
417 public String getTextAlert(int timeOut) {
418     return waitForAlert(timeOut).getText();
419 }
420
421 public void sendKeysAlert(int timeOut, String value) {
422     waitForAlert(timeOut).sendKeys(value);
423 }
424

```

Wait will wait for alert and also switch to alert that's the magic.

Wait for title-

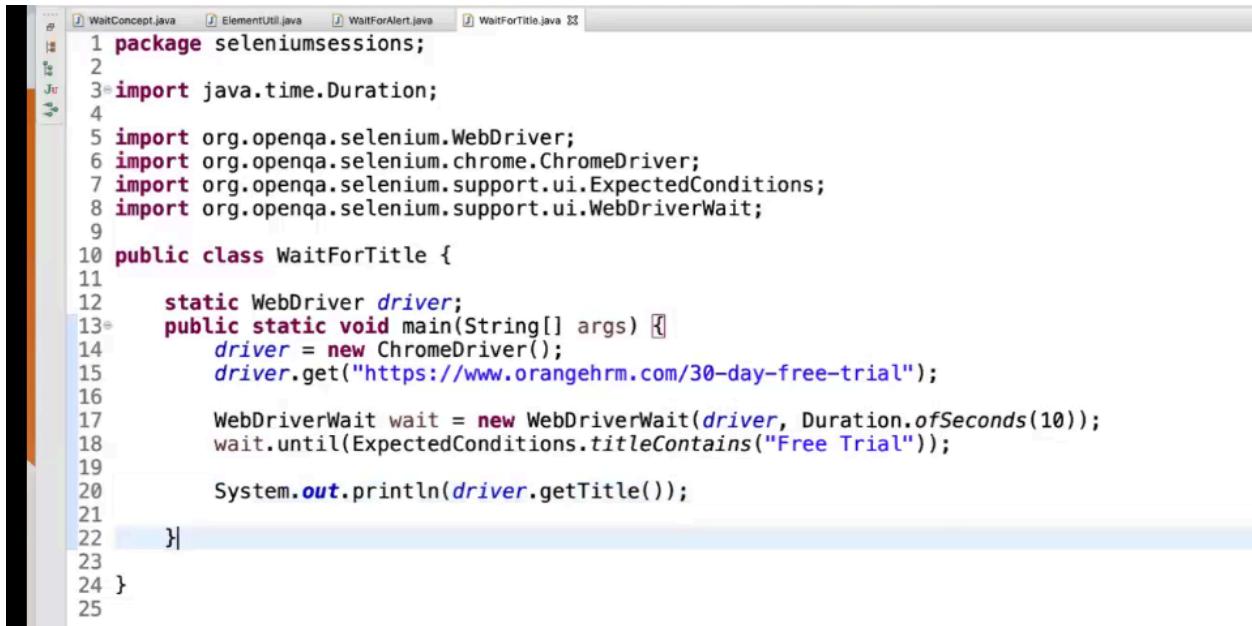
Title is overloaded.

```

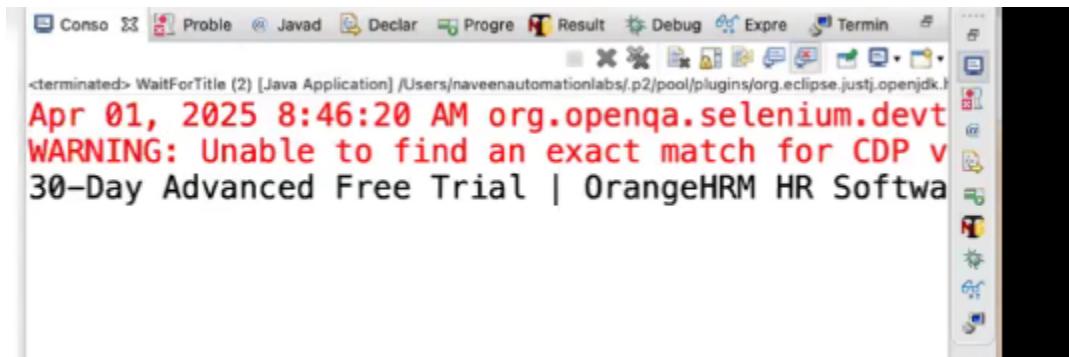
WebDriverWait(driver, Duration.ofSeconds(3)
tions.title)
    titleContains(String title) : ExpectedCondition<Boolean> - ExpectedConditions
    titles(String title) : ExpectedCondition<Boolean> - ExpectedConditions
    frameToBeAvailableAndSwitchToIt(By locator) : ExpectedCondition<WebDriver> - ExpectedConditions

```

Until now returns boolean for title.



```
1 package seleniumsessions;
2
3 import java.time.Duration;
4
5 import org.openqa.selenium.WebDriver;
6 import org.openqa.selenium.chrome.ChromeDriver;
7 import org.openqa.selenium.support.ui.ExpectedConditions;
8 import org.openqa.selenium.support.ui.WebDriverWait;
9
10 public class WaitForTitle {
11
12     static WebDriver driver;
13     public static void main(String[] args) {
14         driver = new ChromeDriver();
15         driver.get("https://www.orangehrm.com/30-day-free-trial");
16
17         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
18         wait.until(ExpectedConditions.titleContains("Free Trial"));
19
20         System.out.println(driver.getTitle());
21     }
22 }
23
24 }
25 }
```



```
<terminated> WaitForTitle (2) [Java Application] /Users/naveenautomationlabs/p2/pool/plugins/org.eclipse.justj.openjdk.java
Apr 01, 2025 8:46:20 AM org.openqa.selenium.devtools
WARNING: Unable to find an exact match for CDP v
30-Day Advanced Free Trial | OrangeHRM HR Softwa
```

Create utility-

Plus call the utility from the same class.

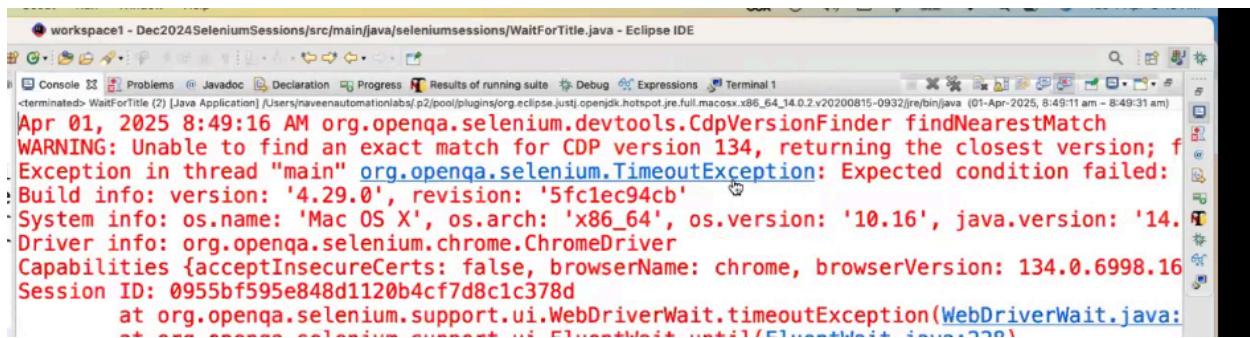
We pass wrong title and see what comes in output.

```

16
17 //      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
18 //      wait.until(ExpectedConditions.titleContains("Free Trial"));
19 //
20 //      System.out.println(driver.getTitle());
21
22     String title = waitForTitleContains("naveen", 5);
23     System.out.println(title);
24 }
25
26 public static String waitForTitleContains(String fractionTitle, int timeOut) {
27     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
28
29     if(wait.until(ExpectedConditions.titleContains(fractionTitle))) {
30         return driver.getTitle();
31     }
32     return null;
33 }
34

```

Timeout exception.



The screenshot shows the Eclipse IDE interface with a terminal window open. The terminal output displays a stack trace for a `TimeoutException`. The relevant part of the stack trace is:

```

Apr 01, 2025 8:49:16 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 134, returning the closest version; f
Exception in thread "main" org.openqa.selenium.TimeoutException: Expected condition failed:
Build info: version: '4.29.0', revision: '5fc1ec94cb'
System info: os.name: 'Mac OS X', os.arch: 'x86_64', os.version: '10.16', java.version: '14.
Driver info: org.openqa.selenium.chrome.ChromeDriver
Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 134.0.6998.16
Session ID: 0955bf595e848d1120b4cf7d8c1c378d
    at org.openqa.selenium.support.ui.WebDriverWait.timeoutException(WebDriverWait.java:
    at org.openqa.selenium.support.ui.WebDriverWait.until(WebDriverWait.java:100)
    at org.openqa.selenium.support.ui.WebDriverWait.until(ExpectedConditions.java:59)
    at org.openqa.selenium.support.ui.WebDriverWait.until(ExpectedConditions.titleContains(...

```

Updated utility method-

Now we dont want exception.

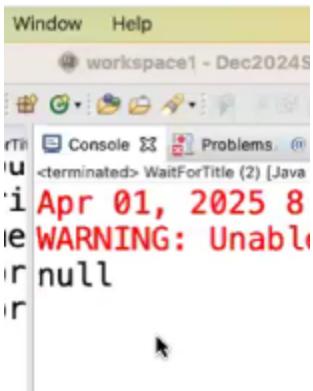
We handle using try catch.

And return null for wrong title.

```

27
28 public static String waitForTitleContains(String fractionTitle, int timeOut) {
29     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
30     try {
31         wait.until(ExpectedConditions.titleContains(fractionTitle));
32         return driver.getTitle();
33     } catch (TimeoutException e) {
34         return null;
35     }
36 }
37
38

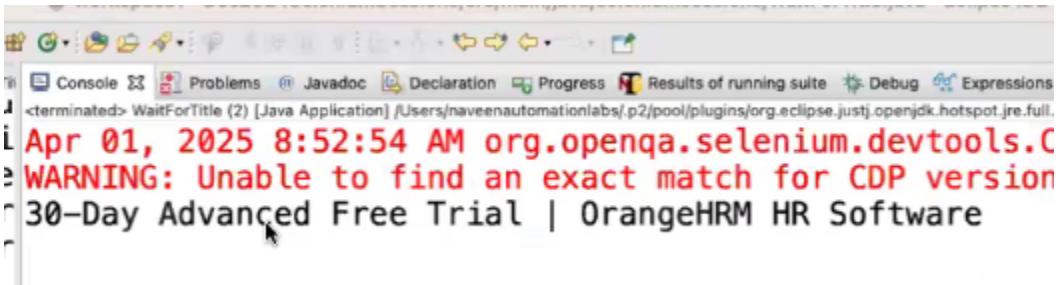
```



```
Window Help
workspace1 - Dec2024S
Console Problems
<terminated> WaitForTitle (2) [Java]
i Apr 01, 2025 8
e WARNING: Unable
r null
r
```

Pass right title-

```
23
24     String title = waitFotTitleContains("Free Trial", 5);
25     System.out.println(title);
```



```
Console Problems Javadoc Declaration Progress Results of running suite Debug Expressions
<terminated> WaitForTitle (2) [Java Application] /Users/naveenautomationlabs/p2/pool/plugins/org.eclipse.justj.openjdk.hotspot.jre.full.
i Apr 01, 2025 8:52:54 AM org.openqa.selenium.devtools.C
e WARNING: Unable to find an exact match for CDP version
30-Day Advanced Free Trial | OrangeHRM HR Software
```

Second title overloaded method also written as utility in same class-

```
39
40  public static String waitFotTitleIs(String title, int timeOut) {
41      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
42      try {
43          wait.until(ExpectedConditions.titleIs(title));
44          return driver.getTitle();
45      } catch (TimeoutException e) {
46          return null;
47      }
48  }
```

Remove hard coded time out from both methods-

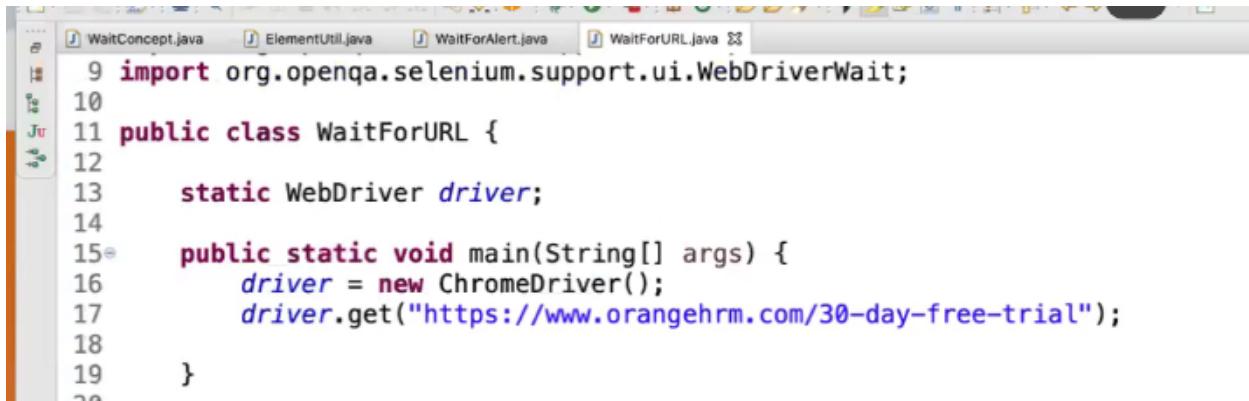
```
27
28  public static String waitFotTitleContains(String fractionTitle, int timeOut) {
29      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
30      try {
31          wait.until(ExpectedConditions.titleContains(fractionTitle));
32          return driver.getTitle();
33      } catch (TimeoutException e) {
34          return null;
35      }
36  }
37
38 }
39
40 public static String waitFotTitleIs(String title, int timeOut) {
41     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
42     try {
43         wait.until(ExpectedConditions.titleIs(title));
44         return driver.getTitle();
45     } catch (TimeoutException e) {
46         return null;
47     }
48 }
49
50 }
```

Move to element util-

```
426
427 //wait for title:
428 public String waitFotTitleContains(String fractionTitle, int timeOut) {
429     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
430     try {
431         wait.until(ExpectedConditions.titleContains(fractionTitle));
432         return driver.getTitle();
433     } catch (TimeoutException e) {
434         return null;
435     }
436 }
437
438 }
439
440 public String waitFotTitleIs(String title, int timeOut) {
441     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
442     try {
443         wait.until(ExpectedConditions.titleIs(title));
444         return driver.getTitle();
445     } catch (TimeoutException e) {
446         return null;
447     }
448 }
449
450 }
```

Writable Smart

Wait for url-



```
9 import org.openqa.selenium.support.ui.WebDriverWait;
10
11 public class WaitForURL {
12
13     static WebDriver driver;
14
15     public static void main(String[] args) {
16         driver = new ChromeDriver();
17         driver.get("https://www.orangehrm.com/30-day-free-trial");
18     }
19 }
```

Orange hrm website.

Click on the button to book a free demo.

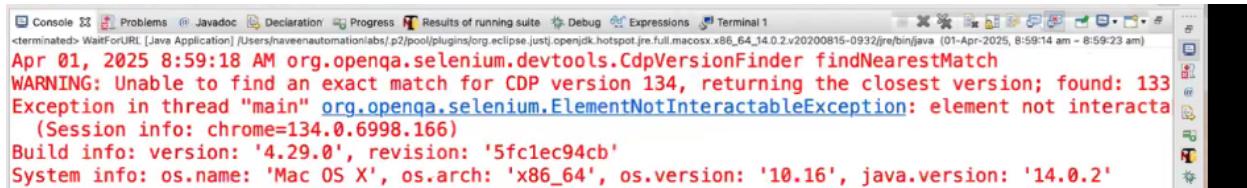
Two static utility method added:

We have written both overloaded methods for url as utility.

```
20
21     public String waitFotURLContains(String fractionURL, int timeOut) {
22         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
23         try {
24             wait.until(ExpectedConditions.urlContains(fractionURL));
25             return driver.getCurrentUrl();
26         } catch (TimeoutException e) {
27             return null;
28         }
29     }
30
31
32
33     public String waitFotTitleIs(String url, int timeOut) {
34         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
35         try {
36             wait.until(ExpectedConditions.urlToBe(url));
37             return driver.getCurrentUrl();
38         } catch (TimeoutException e) {
39             return null;
40         }
41     }
42
43 }
```

Call the utility method from same class-

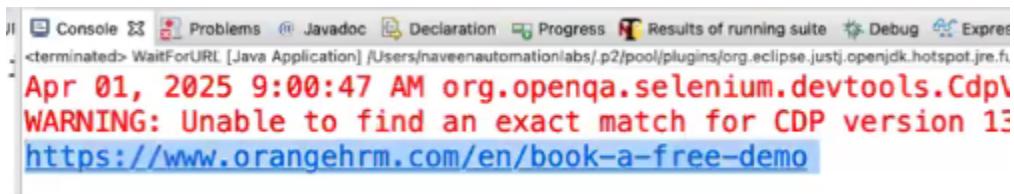
```
18
19     driver.get("https://www.orangehrm.com/30-day-free-trial");
20
21     driver.findElement(By.cssSelector("button.btn-contact-sales")).click();
22
23     String url = waitFotURLContains("book-a-free-demo", 5);
24     System.out.println(url);
}
```



Apr 01, 2025 8:59:18 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 134, returning the closest version; found: 133
Exception in thread "main" org.openqa.selenium.ElementNotInteractableException: element not interactable
(Session info: chrome=134.0.6998.166)
Build info: version: '4.29.0', revision: '5fc1ec94cb'
System info: os.name: 'Mac OS X', os.arch: 'x86_64', os.version: '10.16', java.version: '14.0.2'

Change the locator-
Also Updated spelling mistake of word “for”.

```
19         driver.findElement(By.xpath("//button[text()='Book a Free Demo'])[2]")).click();
20
21     String url = waitForURLContains("book-a-free-demo", 5);
22     System.out.println(url);
23 }
24
25 public static String waitForURLContains(String fractionURL, int timeOut) {
26     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
27     try {
28         wait.until(ExpectedConditions.urlContains(fractionURL));
29         return driver.getCurrentUrl();
30     } catch (TimeoutException e) {
31         return null;
32     }
33 }
34
35
36 }
37
38 public static String waitForURLIs(String url, int timeOut) {
39     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
40     try {
41         wait.until(ExpectedConditions.urlToBe(url));
42         return driver.getCurrentUrl();
43     } catch (TimeoutException e) {
44         return null;
45     }
46 }
```



Apr 01, 2025 9:00:47 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 134, returning the closest version; found: 133
<https://www.orangehrm.com/en/book-a-free-demo>

Wait for frame-
Go to website.
Click image.
Frame activated.
Then type.
Frame method also overloaded.

True
ns.frame()
frameToBeAvailableAndSwitchToIt(By locator) : ExpectedCondition<WebDriver> - ExpectedConditions
frameToBeAvailableAndSwitchToIt(int frameLocator) : ExpectedCondition<WebDriver> - ExpectedConditions
frameToBeAvailableAndSwitchToIt(String frameLocator) : ExpectedCondition<WebDriver> - ExpectedConditions
frameToBeAvailableAndSwitchToIt(WebElement frameLocator) : ExpectedCondition<WebDriver> - ExpectedConditions

It will wait and switch to the frame automatically.
 Until in frames returns webdriver.
 Go to frame enter in one field called proposal title.
 Come back to main page.
 Get the header and print.

```

1 package seleniumsessions;
2
3 import java.time.Duration;
4
5 import org.openqa.selenium.By;
6 import org.openqa.selenium.WebDriver;
7 import org.openqa.selenium.chrome.ChromeDriver;
8 import org.openqa.selenium.support.ui.ExpectedConditions;
9 import org.openqa.selenium.support.ui.WebDriverWait;
10
11 public class WaitForFrame {
12
13     public static void main(String[] args) {
14
15         WebDriver driver = new ChromeDriver(); // browser - chrome
16
17         // page
18         driver.get("https://www.formsite.com/templates/registration-form-templates/vehicle-registration-form/"); // page
19
20         By image = By.xpath("//img[@title='Vehicle-Registration-Forms-and-Examples']");
21         By frame = By.xpath("//iframe[contains(@id,'frame-one')]");
22
23         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
24         wait.until(ExpectedConditions.visibilityOfElementLocated(image)).click();
25
26         wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frame));
27
28         driver.findElement(By.id("RESULT_TextField-1")).sendKeys("testing frame");
29
30         driver.switchTo().defaultContent();
31
32         String header = driver.findElement(By.cssSelector("h3.details__form-preview-title")).getText();
33         System.out.println(header);
34
35     }
36
37 }
  
```

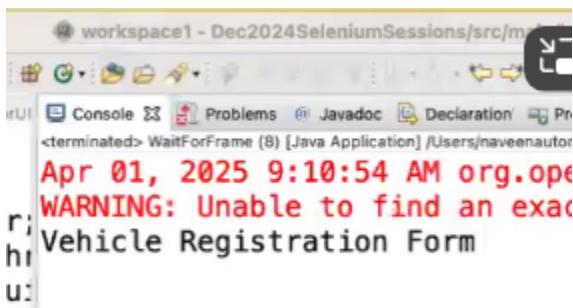
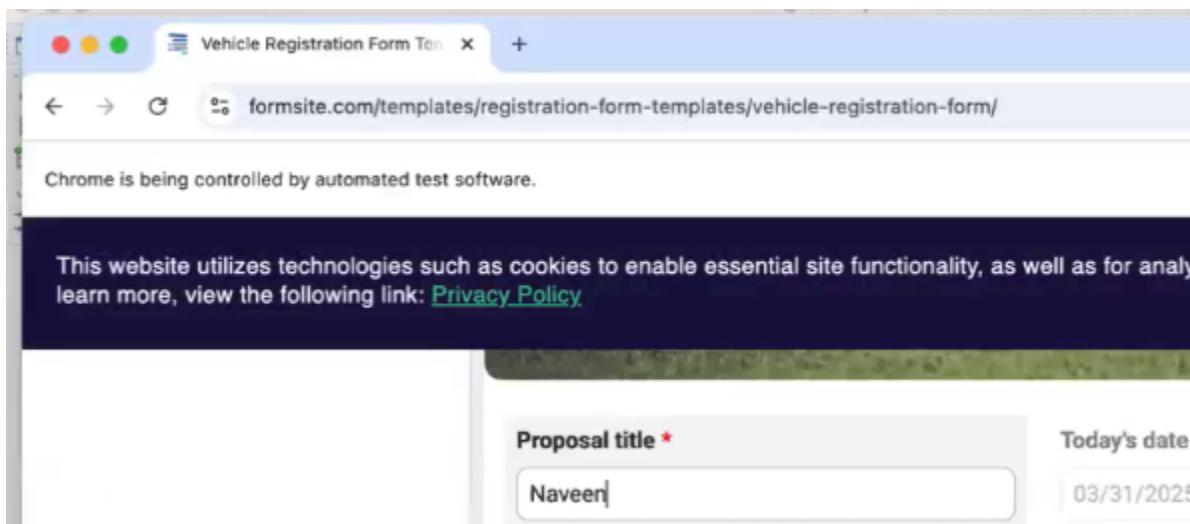
```

Console Problems Javadoc Declaration Progress Results of running suite Debug Expressions Terminal
<terminated> WaitForFrame (8) [Java Application] /Users/naveenautomationlabs/p2pool/plugins/org.eclipse.justj.openjdk.hotspot.jre.full.macosx.x86_64_14.0.2.v20200815-0932/jre/bin/java (01-Apr-2025, 9:08:01 am - 9:08:09 am)
r 01, 2025 9:08:06 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
RNING: Unable to find an exact match for CDP version 134, returning the closest version; found: 133;
ception in thread "main" org.openqa.selenium.NoSuchElementException: no such element: Unable to locate
(Session info: chrome=134.0.6998.166)
  
```

Updated code-
 Added locator for the text field - line 22.

Removed the driver.findElement send keys line and updated it with wait line. Line 30.

```
16 // page
17 driver.get("https://www.formsite.com/templates/registration-form-templates/vehicle-registration-form/");// page
18
19 By image = By.xpath("//img[@title='Vehicle-Registration-Forms-and-Examples']");
20 By frame = By.xpath("//iframe[contains(@id,'frame-one')]");
21 By name = By.id("RESULT_TextField-1");
22
23 WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
24
25 wait.until(ExpectedConditions.visibilityOfElementLocated(image)).click();
26 wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frame));
27
28 wait.until(ExpectedConditions.visibilityOfElementLocated(name)).sendKeys("Naveen");
29
30
31
```



Create utility-
Added 12.
Updated 15.

```

6 import org.openqa.selenium.WebDriver;
7 import org.openqa.selenium.chrome.ChromeDriver;
8 import org.openqa.selenium.support.ui.ExpectedConditions;
9 import org.openqa.selenium.support.ui.WebDriverWait;
10
11 public class WaitForFrame {
12     static WebDriver driver;
13     public static void main(String[] args) {
14
15         driver = new ChromeDriver(); // browser - chrome
16

```

Write all the overloaded frame methods as utility methods-

```

42     public static void waitForFrameAndSwitchToIt(By frameLocator, int timeOut) {
43         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
44         wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameLocator));
45     }
46
47
48     public static void waitForFrameAndSwitchToIt(String frameNameOrID, int timeOut) {
49         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
50         wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameNameOrID));
51     }
52
53
54     public static void waitForFrameAndSwitchToIt(int frameIndex, int timeOut) {
55         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
56         wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameIndex));
57     }
58
59     public static void waitForFrameAndSwitchToIt(WebElement frameElement, int timeOut) {
60         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
61         wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameElement));
62     }
63

```

Call utility-

Same class.

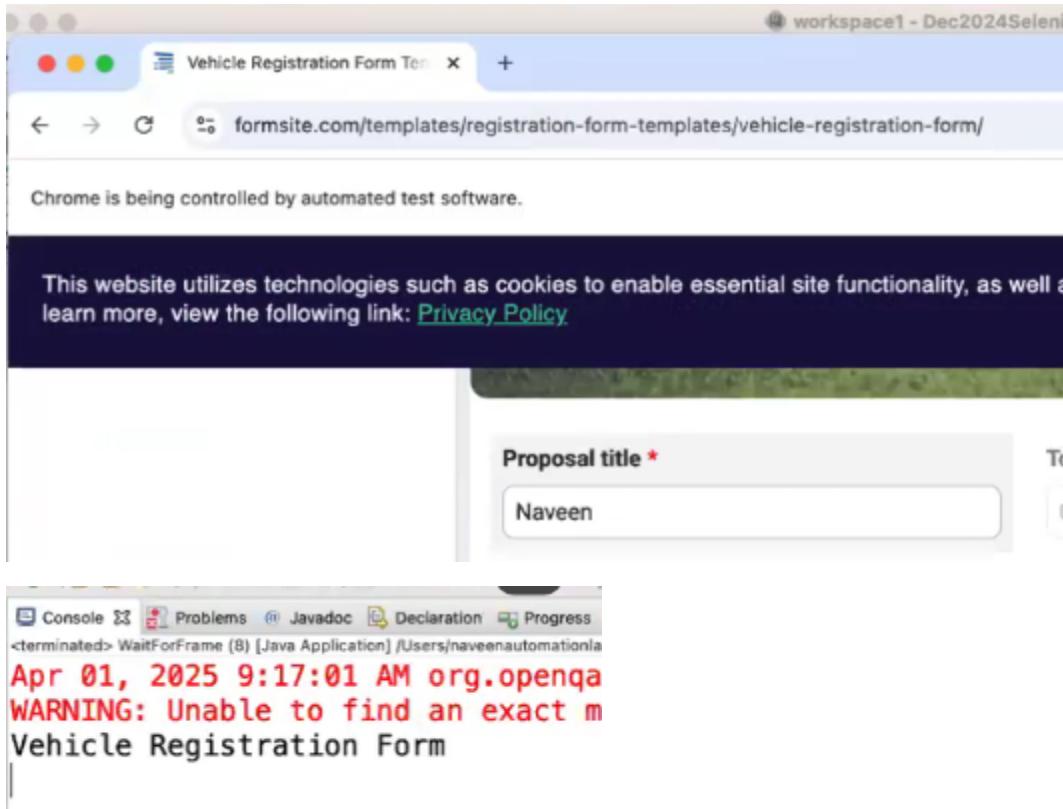
Wait for frame then enter naveen inside it.

Come back to main and then get the header.

```

30
31     waitForFrameAndSwitchToIt(frame, 5);
32
33     wait.until(ExpectedConditions.visibilityOfElementLocated(name)).sendKeys("Naveen");
34
35     driver.switchTo().defaultContent();
36
37     String header = driver.findElement(By.cssSelector("h3.details__form-preview-title")).getText();
38     System.out.println(header);
39
40
41 }
42

```



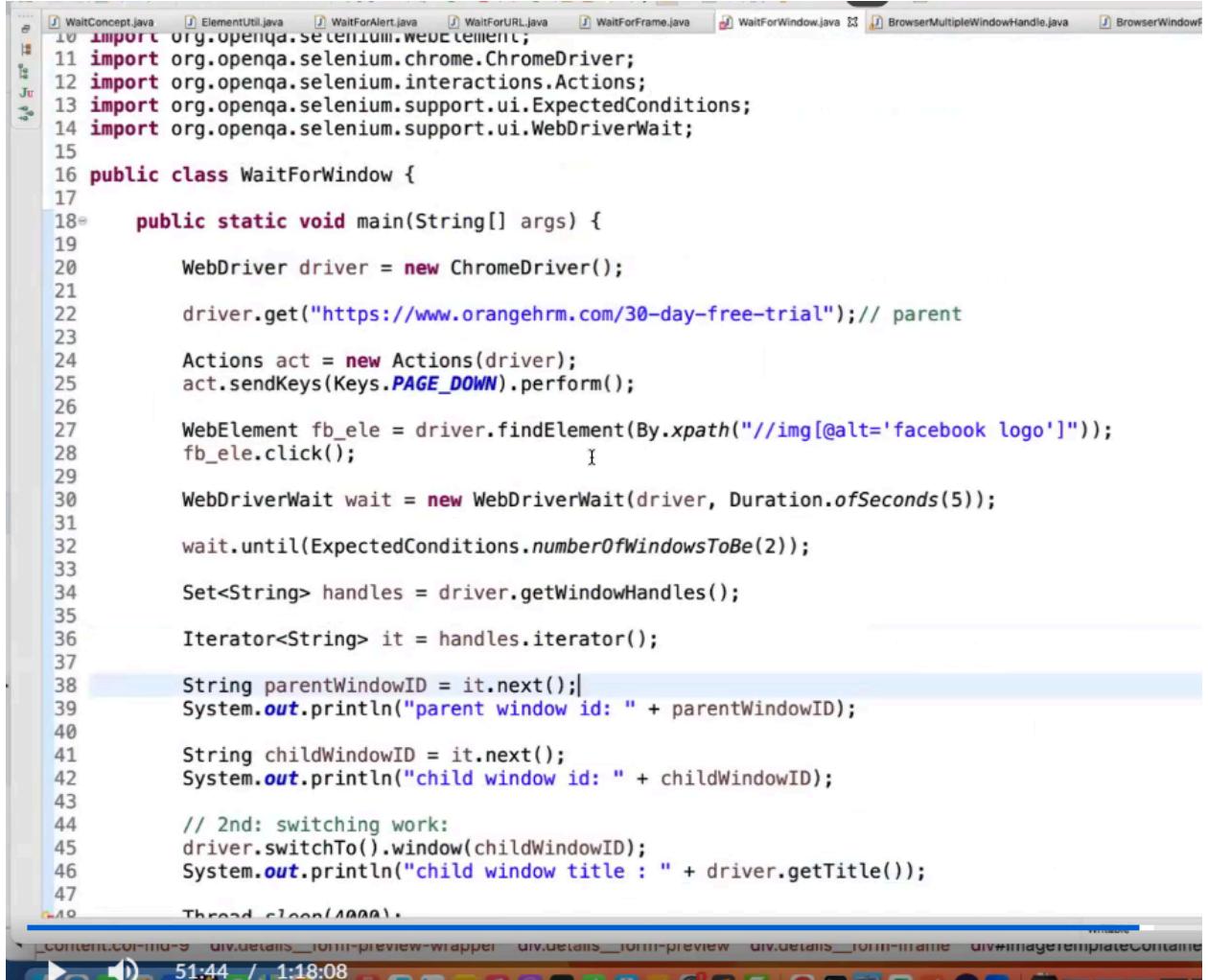
Move to element util-

```

476
477 //wait for frame:
478 public void waitForFrameAndSwitchToIt(By frameLocator, int timeOut) {
479     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
480     wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameLocator));
481 }
482
483
484 public void waitForFrameAndSwitchToIt(String frameNameOrID, int timeOut) {
485     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
486     wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameNameOrID));
487 }
488
489
490 public void waitForFrameAndSwitchToIt(int frameIndex, int timeOut) {
491     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
492     wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameIndex));
493 }
494
495 public void waitForFrameAndSwitchToIt(WebElement frameElement, int timeOut) {
496     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
497     wait.until(ExpectedConditions.frameToBeAvailableAndSwitchToIt(frameElement));
498 }
499

```

Wait for windows-
Orange hrm.
Switch to facebook using the social media links.
Ocd-51



The screenshot shows a Java code editor with several tabs at the top: WaitConcept.java, ElementUtil.java, WaitForAlert.java, WaitForURL.java, WaitForFrame.java, WaitForWindow.java (which is the active tab), BrowserMultipleWindowHandle.java, and BrowserWindowF... . The code in the editor is as follows:

```
10 import org.openqa.selenium.WebDriver;
11 import org.openqa.selenium.chrome.ChromeDriver;
12 import org.openqa.selenium.interactions.Actions;
13 import org.openqa.selenium.support.ui.ExpectedConditions;
14 import org.openqa.selenium.support.ui.WebDriverWait;
15
16 public class WaitForWindow {
17
18     public static void main(String[] args) {
19
20         WebDriver driver = new ChromeDriver();
21
22         driver.get("https://www.orangehrm.com/30-day-free-trial");// parent
23
24         Actions act = new Actions(driver);
25         act.sendKeys(Keys.PAGE_DOWN).perform();
26
27         WebElement fb_ele = driver.findElement(By.xpath("//img[@alt='facebook logo']"));
28         fb_ele.click();
29
30         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
31
32         wait.until(ExpectedConditions.numberOfWindowsToBe(2));
33
34         Set<String> handles = driver.getWindowHandles();
35
36         Iterator<String> it = handles.iterator();
37
38         String parentWindowID = it.next();
39         System.out.println("parent window id: " + parentWindowID);
40
41         String childWindowID = it.next();
42         System.out.println("child window id: " + childWindowID);
43
44         // 2nd: switching work:
45         driver.switchTo().window(childWindowID);
46         System.out.println("child window title : " + driver.getTitle());
47
48         Thread.sleep(1000);
49     }
50 }
```

The status bar at the bottom of the IDE shows the time as 51:44 / 1:18:08.

Ocd2-

Screenshot of a Mac OS X desktop showing an Eclipse IDE window displaying Java code for Selenium window handling. The code demonstrates switching between parent and child windows using WebDriverWait and Actions.

```
22 driver.get("https://www.orangehrm.com/30-day-free-trial");// parent
23
24 Actions act = new Actions(driver);
25 act.sendKeys(Keys.PAGE_DOWN).perform();
26
27 WebElement fb_ele = driver.findElement(By.xpath("//img[@alt='facebook logo']"));
28 fb_ele.click();
29
30 WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
31
32 wait.until(ExpectedConditions.numberOfWindowsToBe(2));
33
34 //1.get the window ids
35 Set<String> handles = driver.getWindowHandles();
36 Iterator<String> it = handles.iterator();
37
38 String parentWindowID = it.next();
39 System.out.println("parent window id: " + parentWindowID);
40
41 String childWindowID = it.next();
42 System.out.println("child window id: " + childWindowID);
43
44 // 2nd: switching work:
45 driver.switchTo().window(childWindowID);
46 System.out.println("child window title : " + driver.getTitle());
47
48 // close the child window:
49 driver.close();
50
51 // driver is lost:
52
53 // switch back to parent window:
54 driver.switchTo().window(parentWindowID);
55 System.out.println("parent window title : " + driver.getTitle());
56
57 }
58
59 }
```

```
WaitConcept.java ElementUtil.java WaitForAlert.java WaitForURL.java WaitForFrame.java *WaitForWindow.java BrowserMultipleWindowHandle.java
1 package seleniumsessions;
2
3 import java.time.Duration;
4
5 import org.openqa.selenium.By;
6 import org.openqa.selenium.Keys;
7 import org.openqa.selenium.WebDriver;
8 import org.openqa.selenium.WebElement;
9 import org.openqa.selenium.chrome.ChromeDriver;
10 import org.openqa.selenium.interactions.Actions;
11 import org.openqa.selenium.support.ui.WebDriverWait;
12
13 public class WaitForWindow {
14
15     public static void main(String[] args) {
16
17         WebDriver driver = new ChromeDriver();
18
19         driver.get("https://www.orangehrm.com/30-day-free-trial");// parent
20
21         Actions act = new Actions(driver);
22         act.sendKeys(Keys.PAGE_DOWN).perform();
23
24         WebElement fb_ele = driver.findElement(By.xpath("//img[@alt='facebook logo']"));
25         fb_ele.click();
26
27
28
29
30         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
31
32         wait.until(ExpectedConditions.numberOfWindowsToBe(2));
33
34         //1.get the window ids
35         Set<String> handles = driver.getWindowHandles();
36         Iterator<String> it = handles.iterator();
37
38
39
40
41
42
43
```

Number of windows to be method requires int (expected number of windows) as parameter.
Until here returns boolean.
Windows wont be switched automatically.

```
29
30         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
31
32         wait.until(ExpectedConditions.numberOfWindowsToBe(2));
33
34         //1.get the window ids
35         Set<String> handles = driver.getWindowHandles();
36         Iterator<String> it = handles.iterator();
37
38
39
40
41
42
43
```

Move the iterator two times to child.

```
37
38         String parentWindowID = it.next();
39         System.out.println("parent window id: " + parentWindowID);
40
41         String childWindowID = it.next();
42         System.out.println("child window id: " + childWindowID);
43
```

Switch to child window.

Get title.

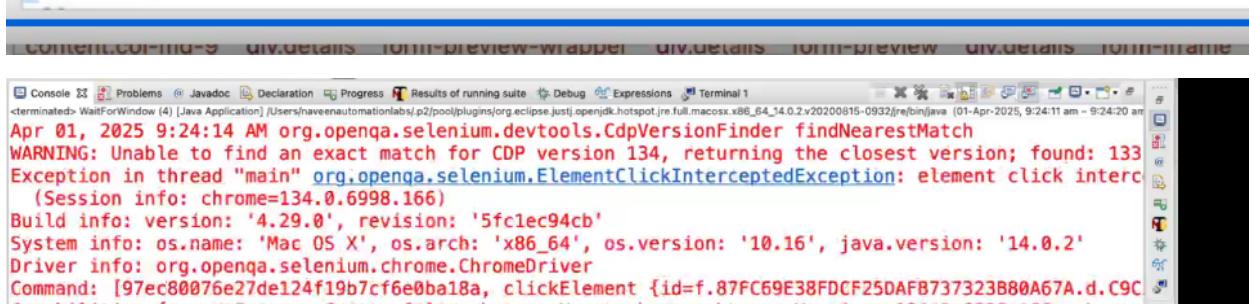
Close the window after work.

```
43
44     // 2nd: switching work:
45     driver.switchTo().window(childWindowID);
46     System.out.println("child window title : " + driver.getTitle());
47
48     // close the child window:
49     driver.close();
```

Come back to parent and print title of parent.

Just we verify if one window is closed and only one is opened using the wait and passing “1” as parameter.

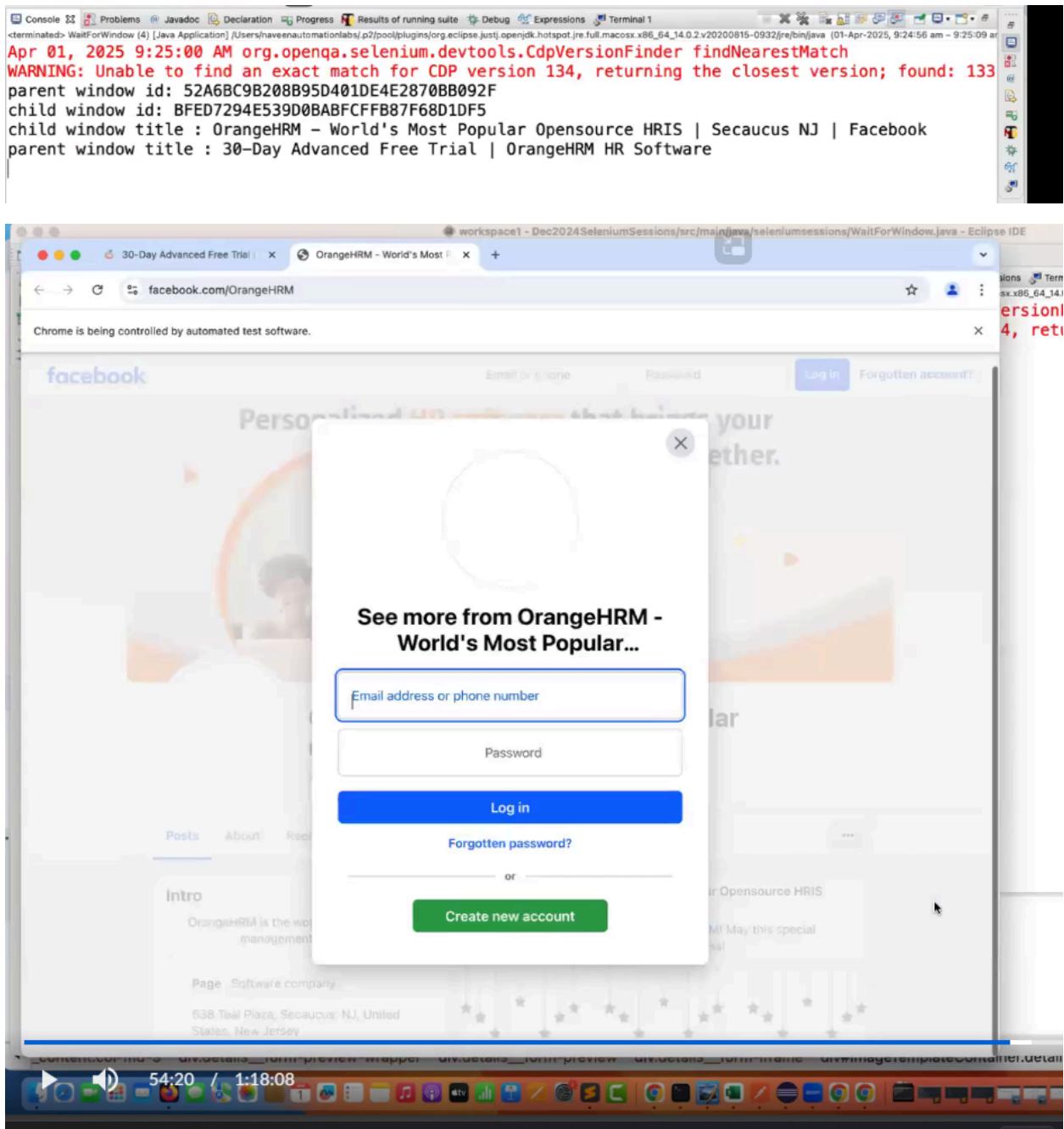
```
47
48     // close the child window:
49     driver.close();
50
51     wait.until(ExpectedConditions.numberOfWindowsToBe(1));
52
53     // driver is lost:
54
55     // switch back to parent window:
56     driver.switchTo().window(parentWindowID);
57     System.out.println("parent window title : " + driver.getTitle());
58
59 }
```



Added line 23 full screen-
To solve above issue.

```
21
22     driver.get("https://www.orangehrm.com/30-day-free-trial");// parent
23     driver.manage().window().fullscreen();
```

Opens facebook, closes it and then prints.



Create utility-
Same class.
Added 18.
Changed 22.

```

15
16 public class WaitForWindow {
17
18     static WebDriver driver;
19
20     public static void main(String[] args) {
21
22         driver = new ChromeDriver();
23
24         driver.get("https://www.orangehrm.com/30-day-
25         driver.manage().window().fullscreen();

```

Utility ready.

```

62
63     public static boolean waitForWindow(int timeOut, int expectedNumberOfWindows) {
64         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
65
66         try {
67             return wait.until(ExpectedConditions.numberOfWindowsToBe(expectedNumberOfWindows));
68         } catch (Exception e) {
69             return false;
70         }
71     }
72 }

```

Updated catch block with sysout.

```

63     public static boolean waitForWindow(int timeOut, int expectedNumberOfWindows) {
64         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
65
66         try {
67             return wait.until(ExpectedConditions.numberOfWindowsToBe(expectedNumberOfWindows));
68         } catch (Exception e) {
69             System.out.println("expectedNumberOfWindows are not correct");
70             return false;
71         }
72     }
73 }

```

Updated the parameter.

Changed timeout to last parameter to beautify the code.

```

64
65     public static boolean waitForWindow(int expectedNumberOfWindows, int timeOut,) {
66         WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));
67
68         try {
69             return wait.until(ExpectedConditions.numberOfWindowsToBe(expectedNumberOfWindows));
70         } catch (Exception e) {
71             System.out.println("expectedNumberOfWindows are not correct");
72             return false;
73         }
74
75     }
76

```

Call utility from same class-
Orange hrm.
Click facebook.

```
19
20  public static void main(String[] args) {
21
22      driver = new ChromeDriver();
23
24      driver.get("https://www.orangehrm.com/30-day-free-trial");// parent
25      driver.manage().window().fullscreen();
26
27      Actions act = new Actions(driver);
28      act.sendKeys(Keys.PAGE_DOWN).perform();
29
30      WebElement fb_ele = driver.findElement(By.xpath("//img[@alt='facebook logo']"));
31      fb_ele.click();
32
33 //      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
34 //      wait.until(ExpectedConditions.numberOfWindowsToBe(2));
35
36 //      WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(5));
37 //      wait.until(ExpectedConditions.numberOfWindowsToBe(2));
38
39 if (waitForWindow(2, 5)) {
40
41     // 1.get the window ids
42     Set<String> handles = driver.getWindowHandles();
43     Iterator<String> it = handles.iterator();
44
45     String parentWindowID = it.next();
46     System.out.println("parent window id: " + parentWindowID);
47
48     String childWindowID = it.next();
49     System.out.println("child window id: " + childWindowID);
50
51     // 2nd: switching work:
52     driver.switchTo().window(childWindowID);
53     System.out.println("child window title : " + driver.getTitle());
54
55     // close the child window:
56     driver.close();
57
58     // driver is lost:
59
60     // switch back to parent window:
61     driver.switchTo().window(parentWindowID);
62     System.out.println("parent window title : " + driver.getTitle());
63
64 }
```

Opened both windows.

```

<terminated> WaitForWindow (4) [Java Application] /Users/naveenautomationlabs/.p2/pool/plugins/org.eclipse.justj.openjdk.hotspot.jre.full.macosx.x86_64_14.0.2.v20200815-0932/re/bin/java (01-Apr-2025)
Apr 01, 2025 9:29:53 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 134, returning the closest version; found: 13
parent window id: C5268F9779A7DF021EE2C68AB7290C9B
child window id: 9541680E92FDF12968FA94A8E9AD7CFA
child window title : OrangeHRM - World's Most Popular Opensource HRIS | Secaucus NJ | Facebook
parent window title : 30-Day Advanced Free Trial | OrangeHRM HR Software

```

Lets try for negative-

We say only one window should be there but we get two.

```

35
36     if (waitForWindow(1, 5)) {
37

```

Opens facebook.

```

Apr 01, 2024 9:30:24 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 134, returning the closest version; found: 13
expectedNumberOfWindows are not correct

```

Paste in element util-

```
491 // wait for windows:  
492  
493 public boolean waitForWindow(int expectedNumberOfWindows, int timeOut) {  
494     WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(timeOut));  
495  
496     try {  
497         return wait.until(ExpectedConditions.numberOfWindowsToBe(expectedNumberOfWindows));  
498     } catch (Exception e) {  
499         System.out.println("expectedNumberOfWindows are not correct");  
500         return false;  
501     }  
502 }  
503 }
```

1.17 -

Automation for happy path scenarios only.