

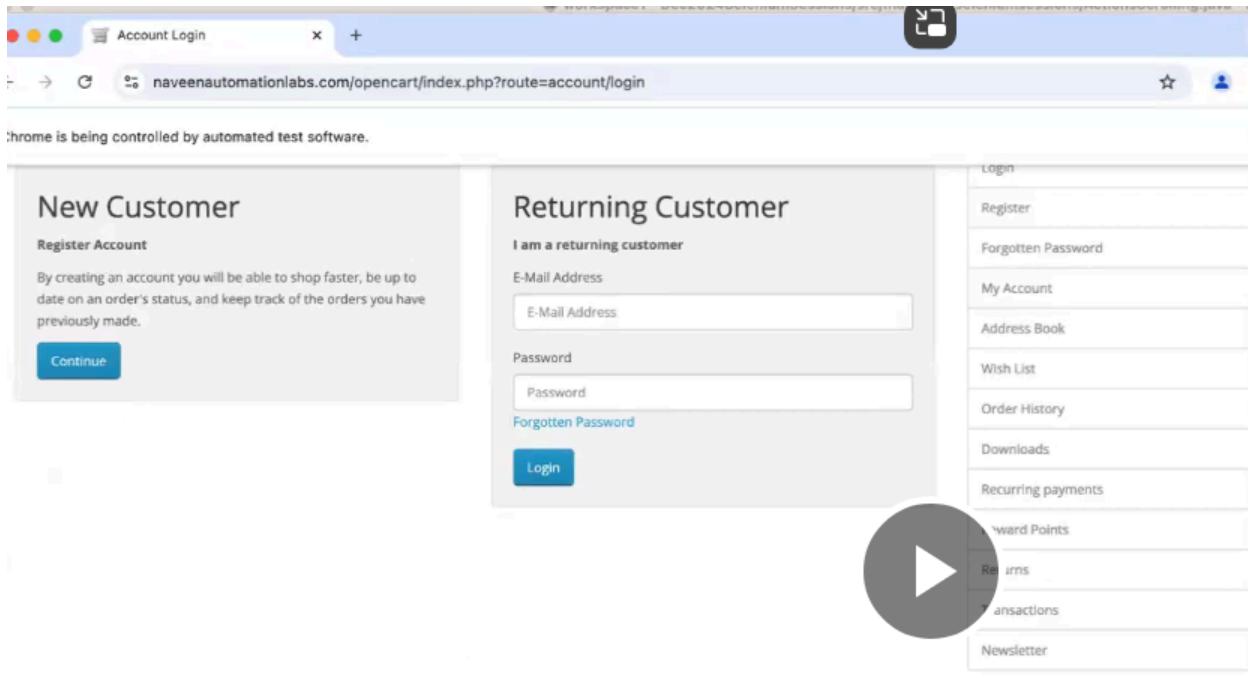
Scroll down-
Naveen website.
Register page.



The screenshot shows a Java code editor with a tab bar containing four tabs: 'MoveToElementConcept.java', 'DragAndDropConcept.java', 'ContextClickConcept.java', and 'ActionsScrolling.java'. The 'ActionsScrolling.java' tab is active. The code in the editor is as follows:

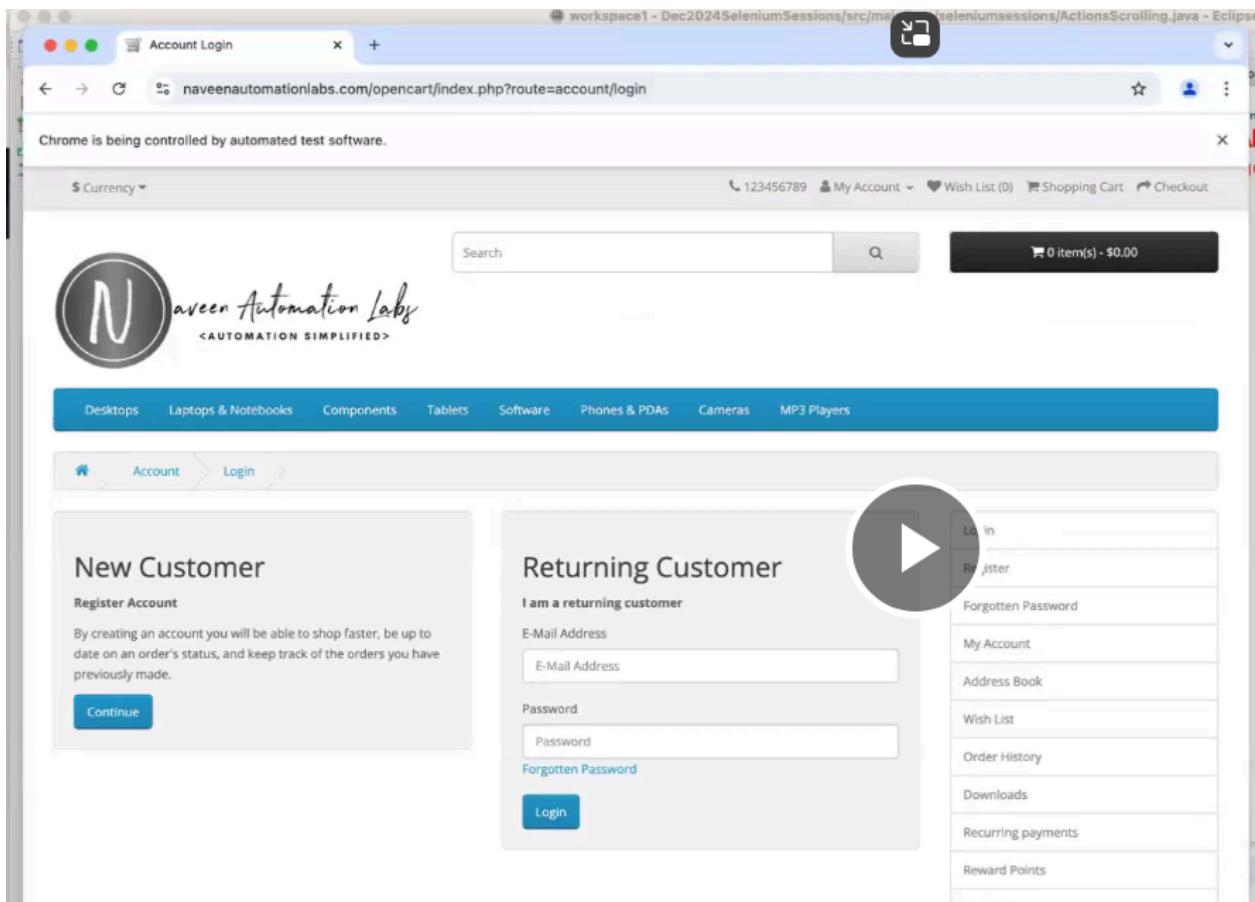
```
1 package seleniumsessions;
2
3 import org.openqa.selenium.Keys;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.chrome.ChromeDriver;
6 import org.openqa.selenium.interactions.Actions;
7
8 public class ActionsScrolling {
9
10    static WebDriver driver;
11
12    public static void main(String[] args) throws InterruptedException {
13
14        driver = new ChromeDriver();
15
16        driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/login");
17
18        Actions act = new Actions(driver);
19        act.sendKeys(Keys.PAGE_DOWN).perform();
20
21    }
22
23 }
24
```

The line 'act.sendKeys(Keys.PAGE_DOWN).perform();' is highlighted with a light blue background, indicating it is the current line of interest.



Scroll up-
Naveen website.
Register page.

```
20
21      Thread.sleep(2000);
22
23      act.sendKeys(Keys.PAGE_UP).perform();
24
```



Above two methods are partial scroll because they just click page down and page up once.

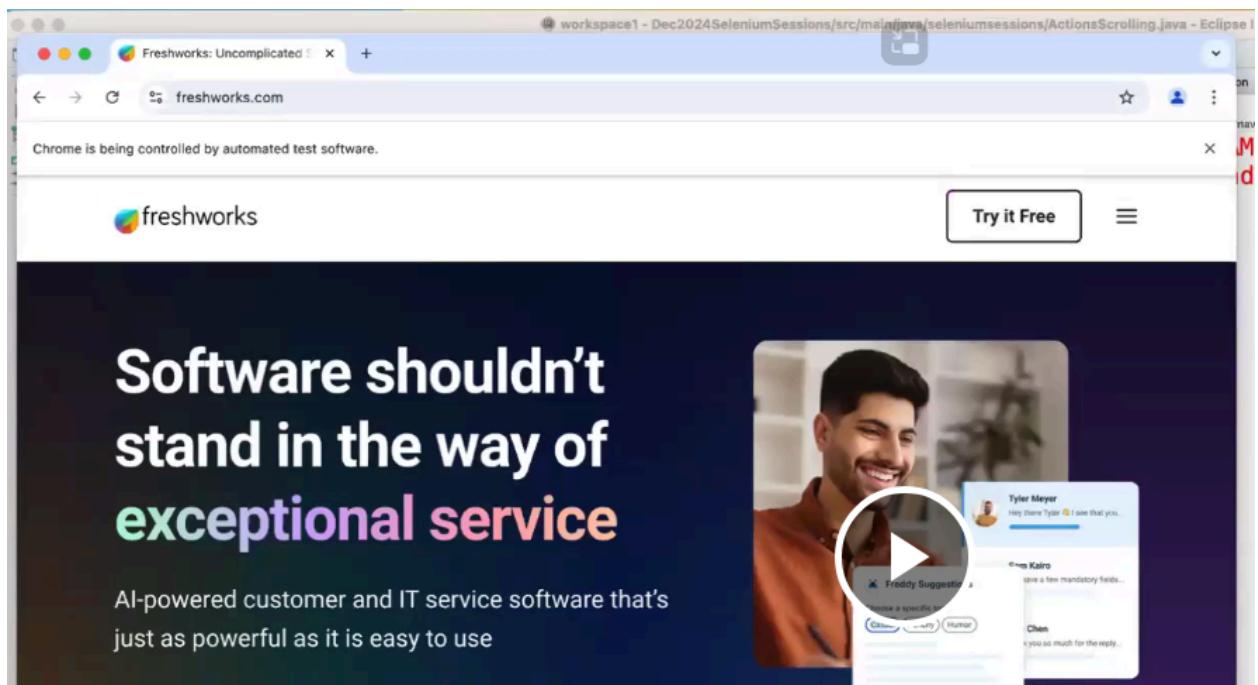
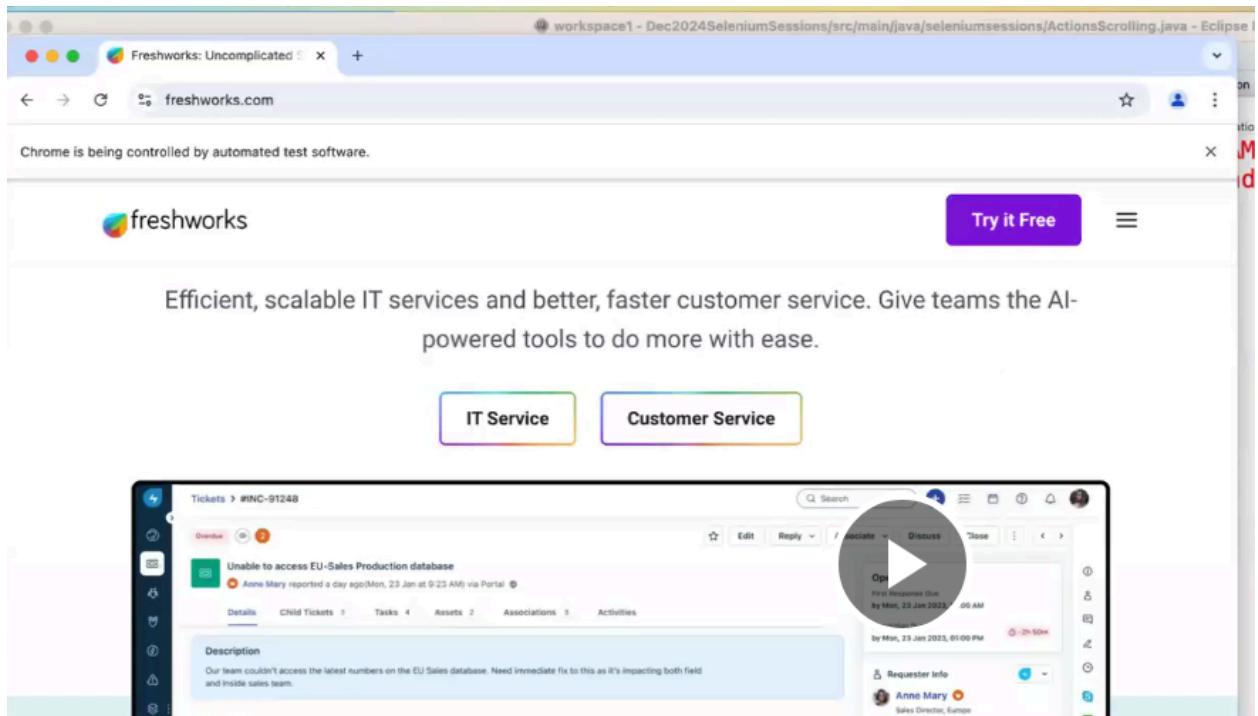
Change to amazon -

```
15  
16     driver.get("https://www.amazon.com/");  
17
```

Amazon blocked the automation.

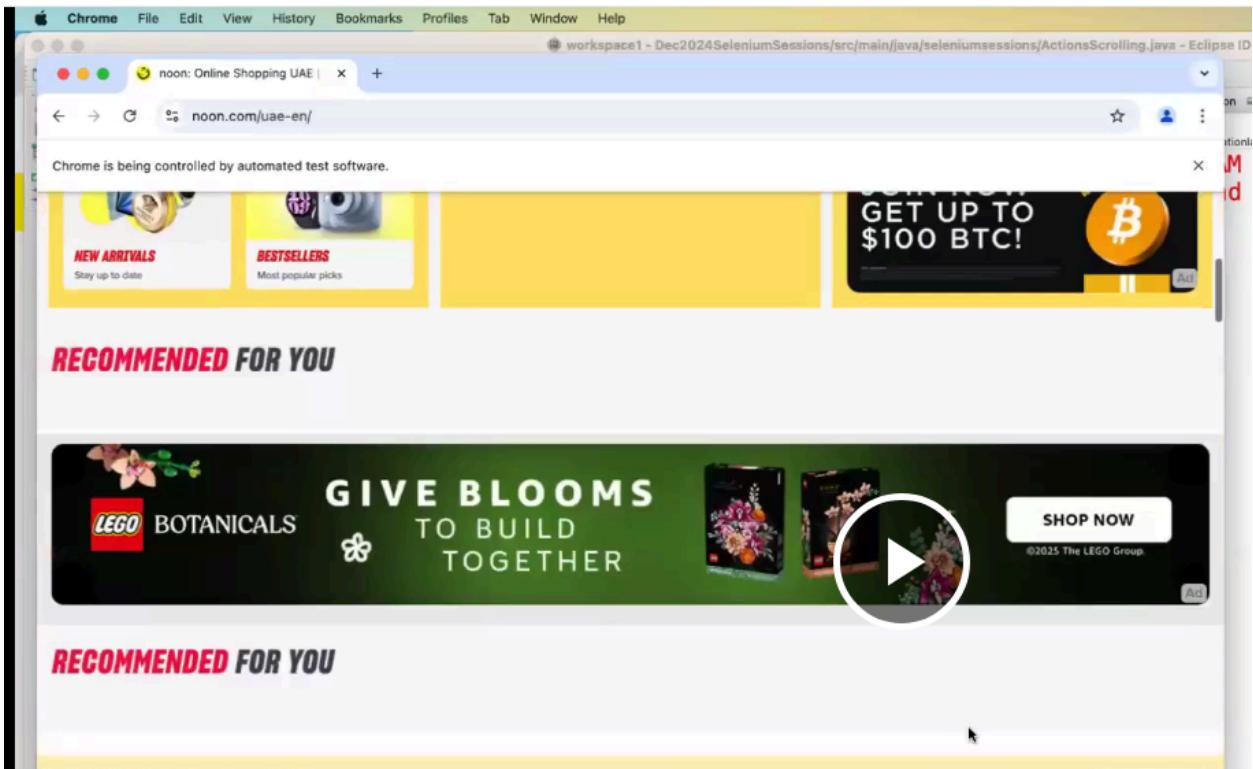
Another url-

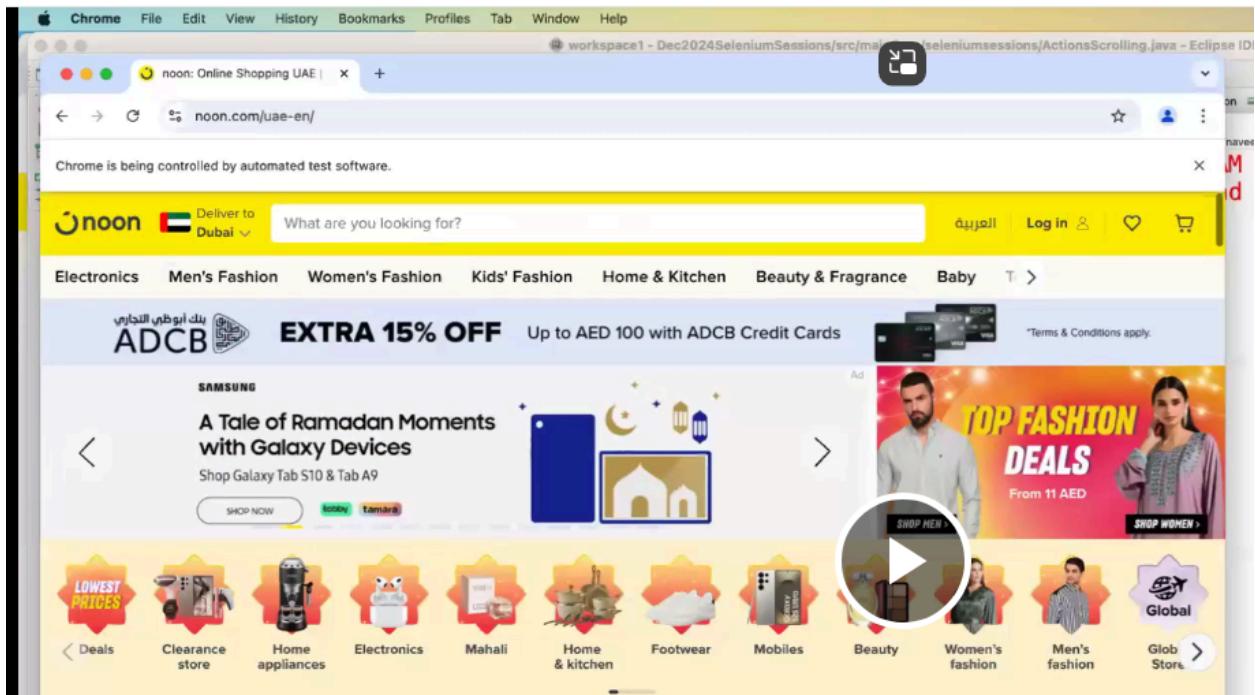
```
15  
16     driver.get("https://www.freshworks.com/");  
17
```



Check another url-

```
15  
16     driver.get("https://www.noon.com/uae-en/");  
17  
18     Actions act = new Actions(driver);
```





Go to bottom or footer of page-
 Naveen website not working.14.00
 Change url-

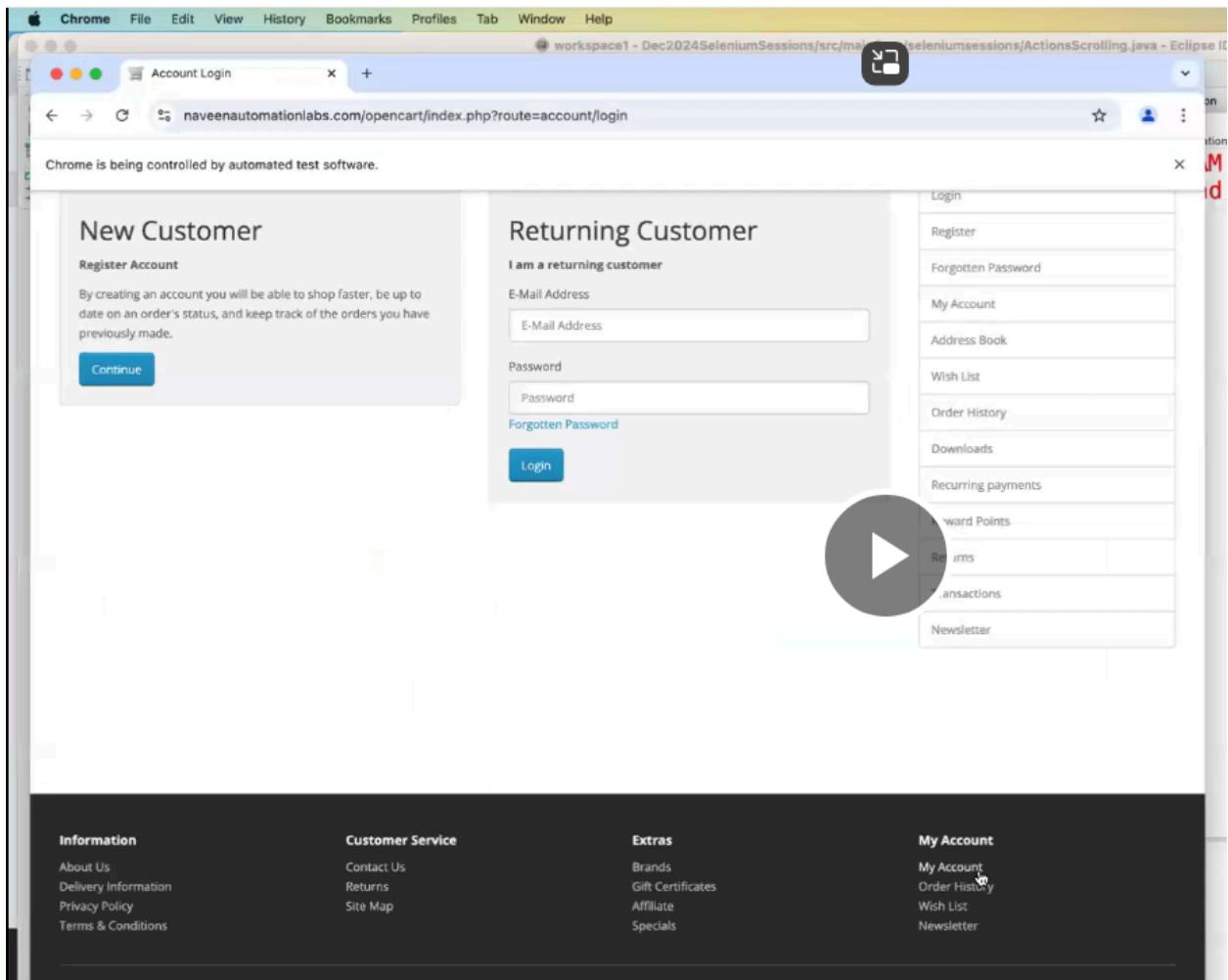
```
15
16     driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/login");
17
```

Clearer 16-

```
driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/login");
```

```
25
26
27     //go to footer of the page:
28     act.sendKeys(Keys.COMMAND).sendKeys(Keys.END).build().perform();
```

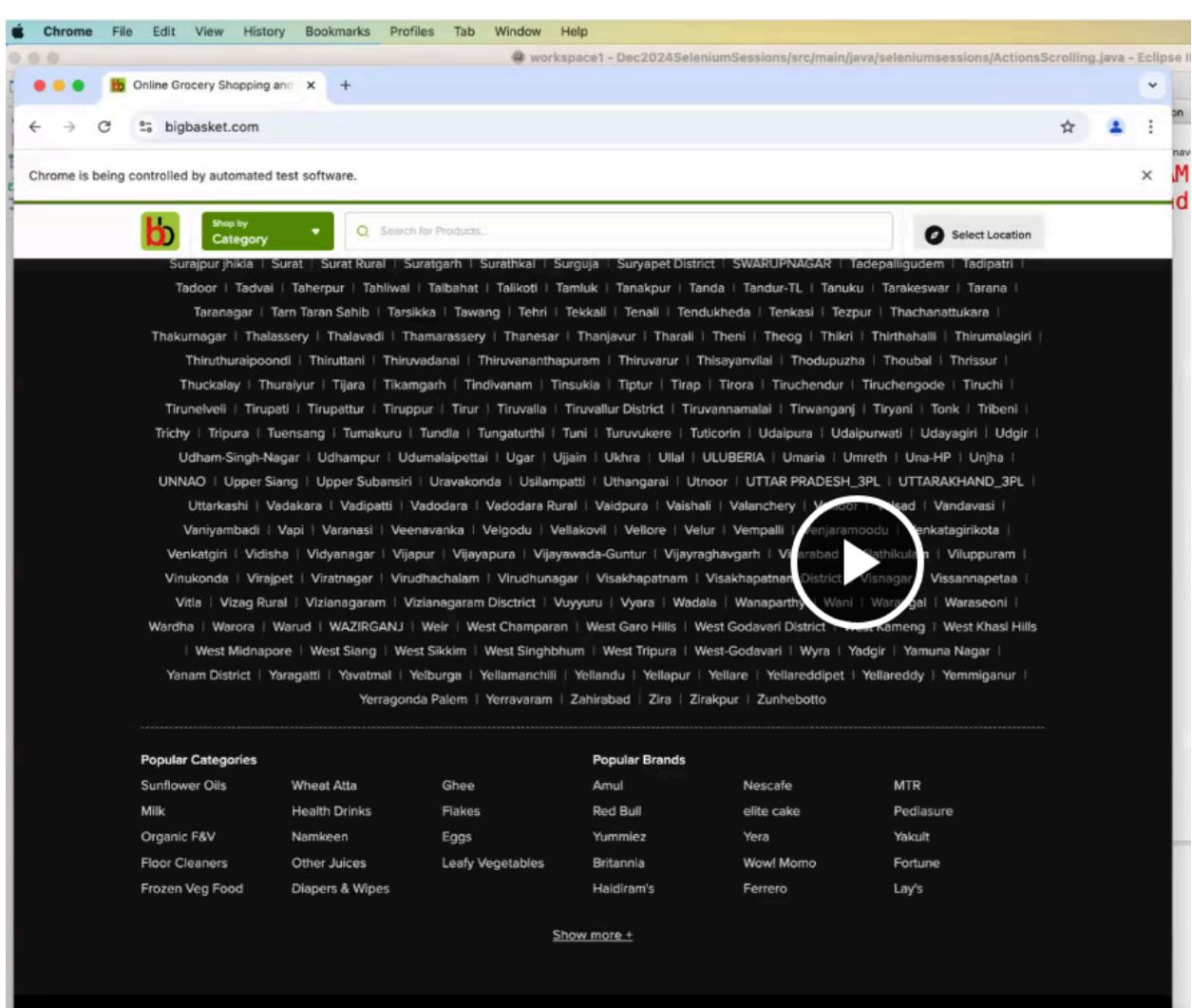
Check if scroll down working. Nope its not working.



Change url-
Big basket website.

```
15  
16     driver.get("https://www.bigbasket.com/");  
17
```

Scroll down working.

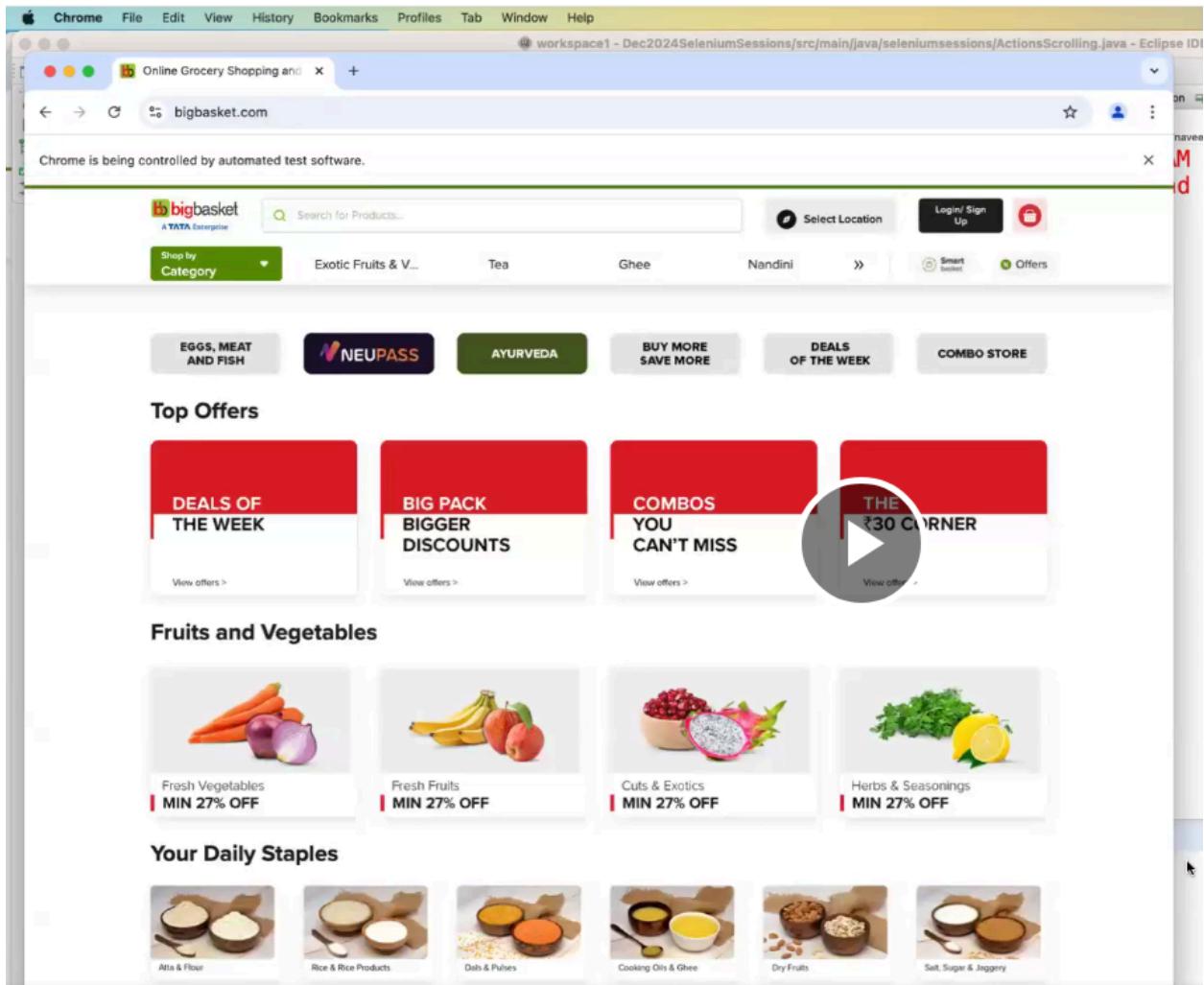


Go to the top of the page-
Same big basket website.

```

29     Thread.sleep(2000);
30     //go to top of the page:
31     act.sendKeys(Keys.COMMAND).sendKeys(Keys.HOME).perform();
32

```



Keys in window and mac-
For scrolling.

```

26
27      //go to footer of the page:
28      //windows: Keys.CONTROL
29      //mac: Keys.COMMAND
30      act.sendKeys(Keys.COMMAND).send

```

Scroll to element-

Scroll to open cart footer link and click on it.

Naveen website.

Pause method can be used with duration class or we can pass long value. Pause is overloaded method.

Click method in actions also overloaded. Click without parameters. Click with webelement.

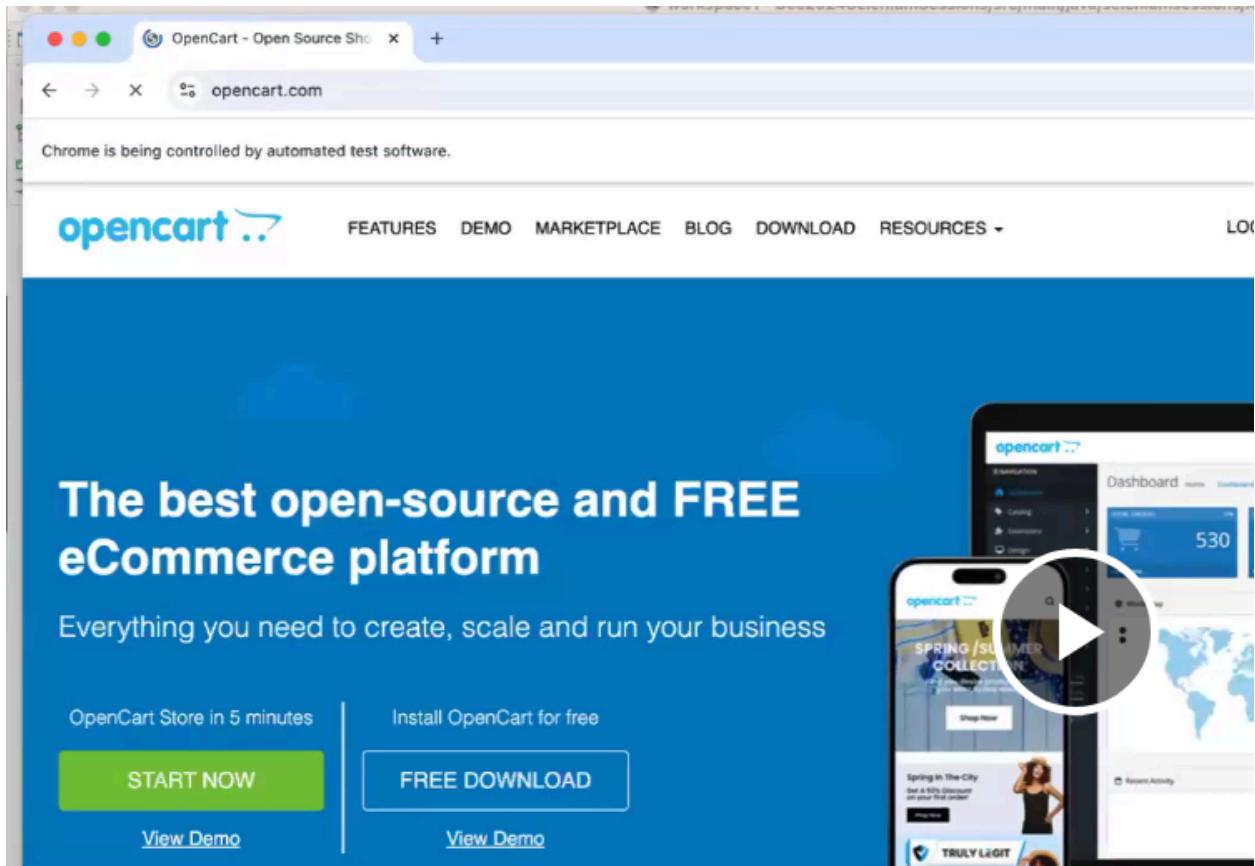
Lets go to target element and click on it.

If you use click() without webelement, wherever the mouse is after scrolling down, there it will click.

```
--  
36      //scroll to element:  
37      act  
38          .scrollToElement(driver.findElement(By.linkText("OpenCart")))  
39              .pause(200)  
40                  .click(driver.findElement(By.linkText("OpenCart")))  
41                      .build().perform();  
42
```

Url change-

```
16      driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/login");  
17  
18
```



Send keys from actions also overloaded-
Char sequence and webelement plus char
sequence.

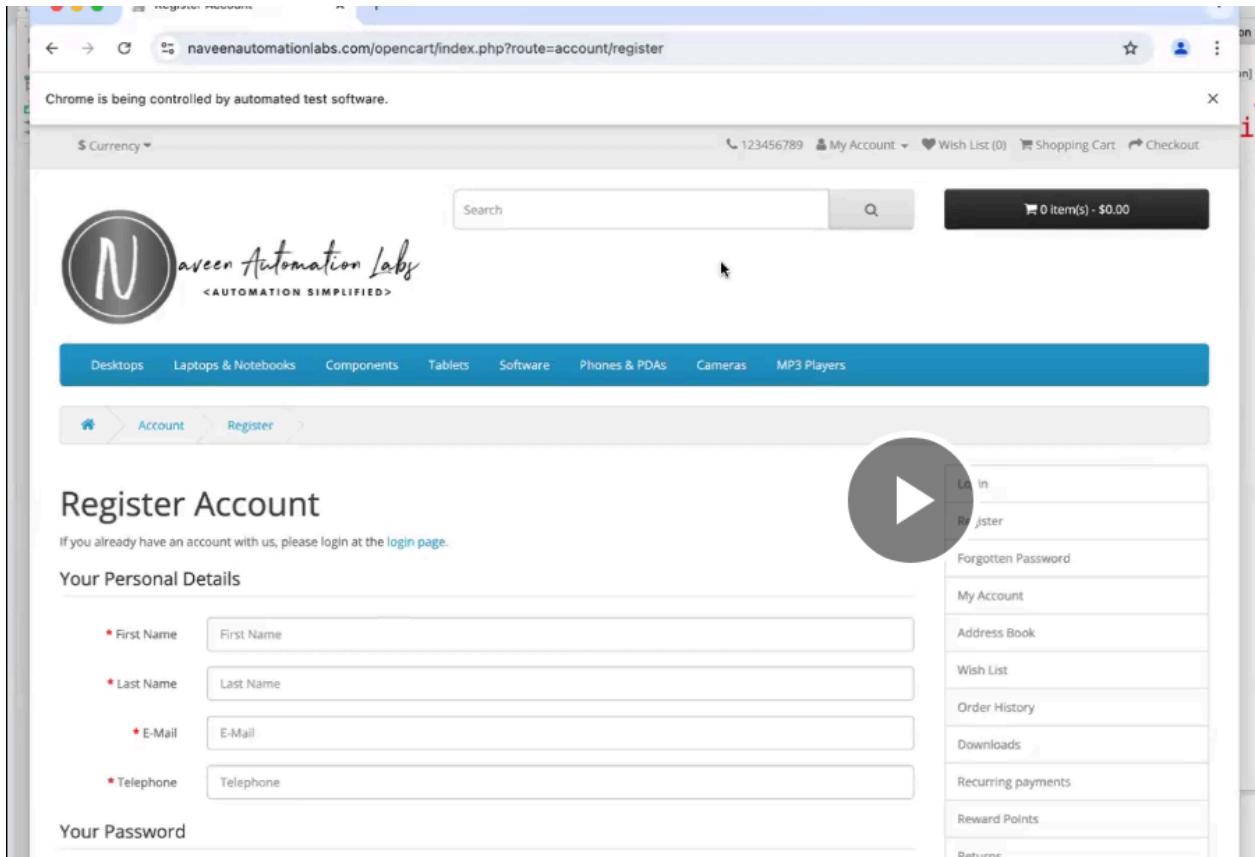


Naveen website.
Lets see where it enters.
As per rule it should enter on active element i.e.
where cursor blinks.
Here we dont have that.

```
1 package seleniumsessions;
2
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.chrome.ChromeDriver;
5 import org.openqa.selenium.interactions.Actions;
6
7 public class ActionsClickAndSendKeys {
8
9     static WebDriver driver;
10
11    public static void main(String[] args) throws InterruptedException {
12
13        driver = new ChromeDriver();
14
15        driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/register");
16
17        Actions act = new Actions(driver);
18
19        act.sendKeys("testing").perform();
20
21    }
22
23 }
24
```

Clearer line 15-

driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/register");



No error also in output.

Use the other send keys which is the best method-
Pass in webelement and the key to enter.

```
21     WebElement fn = driver.findElement(By.id("input-firstname"));
22
23     act.sendKeys(fn, "testing").perform();
```

Register Account

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Your Personal Details

* First Name

//Equivalent to calling: Actions.click(element).sendKeys(keysToSend).

28.00

Difference between normal send keys and action
send keys-

Normal will directly enter.

Action send key will click and then enter.

Click on the checkbox of privacy-

```
21  
22     WebElement checkBox = driver.findElement(By.name("agree"));  
23  
24  
25  
26  
27     //Clicks in the middle of the given element.  
28     //Equivalent to: Actions.moveToElement(onElement).click()  
29     act.click(checkBox).perform();  
30
```

3 naveenautomationlabs.com/opencart/index.php?route=account/register

ing controlled by automated test software.

 Naveen Automation Labs
<AUTOMATION SIMPLIFIED>

ops Laptops & Notebooks Components Tablets Software Phones & PDAs Cameras MP3 Players

Account Register >

ster Account

If you already have an account with us, please login at the [login page](#).

Personal Details

First Name: testing

Last Name: Last Name

* E-Mail: E-Mail

Telephone: Telephone

Password

Password: Password

Confirm Password: Password Confirm

Letter

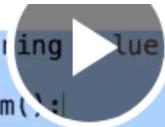
Subscribe: Yes No

By clicking the Continue button, you agree to the [Privacy Policy](#) and [Terms of Use](#). [Continue](#)

Actions slower than normal send keys and clicks, as it first goes to middle of element and then performs actions.

Create utility-

```
54  
35     public static WebElement getElement(By locator) {  
36         return driver.findElement(locator);  
37     }  
38  
39     public static void doActionsClick(By locator) {  
40         Actions act = new Actions(driver);  
41         act.click(getElement(locator)).perform();  
42     }  
43  
44     public static void doActionsSendKeys(By locator, String value) {  
45         Actions act = new Actions(driver);  
46         act.sendKeys(getElement(locator), value).perform();  
47     }  
48
```



Clearer last method-

```
public static void doActionsSendKeys(By locator, String value){  
    Actions act = new Actions(driver);  
    act.sendKeys(getElement(locator), value).perform();  
}
```

Move to element util-

Create actions at global level to avoid repetition of the actions initialisation statement.

In constructor initialise it. We can pass driver or this.driver, both will work.

```
3*import java.util.ArrayList;  
12  
13 public class ElementUtil {  
14  
15     private WebDriver driver;  I  
16     private Actions act;  
17  
18     public ElementUtil(WebDriver driver) {  
19         this.driver = driver;  
20         act = new Actions(driver);  
21     }  
22
```

Remove the action initialising line from every actions util method-

```
310
311 //*****Actions Utils*****
312
313 public void doMoveToElement(By locator) throws InterruptedException {
314     act.moveToElement(getElement(locator)).build().perform();
315     Thread.sleep(2000);
316 }
317
318 public void handleParentSubMenu(By parentMenu, By subMenu) throws InterruptedException {
319     doMoveToElement(parentMenu);
320     doClick(subMenu);
321 }
322
323 public void handle4LevelMenuHandle(By level1Menu, By level2Menu, By level3Menu, By level4Menu) throws InterruptedException {
324     doClick(level1Menu);
325     Thread.sleep(2000);
326     doMoveToElement(level2Menu);
327     Thread.sleep(2000);
328     doMoveToElement(level3Menu);
329     Thread.sleep(2000);
330     doClick(level4Menu);
331 }
332
333 public void doActionsSendKeys(By locator, String value) {
334     act.sendKeys(getElement(locator), value).perform();
335 }
336
337 public void doActionsClick(By locator) {
338     act.click(getElement(locator)).perform();
339 }
340
341
342
343
344
345
346
347
348 }
349
```



Clearer line 329-

```
public void handle4LevelMenuHandle(By level1Menu, By level2Menu, By level3Menu, By level4Menu)
throws InterruptedException {
```

Actions with pause-
Naveen website.
Register page.



```
1 package seleniumsessions;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.WebElement;
6 import org.openqa.selenium.chrome.ChromeDriver;
7 import org.openqa.selenium.interactions.Actions;
8
9 public class ActionsSendKeysWithPause {
10
11     static WebDriver driver;
12
13     public static void main(String[] args) throws InterruptedException {
14
15         driver = new ChromeDriver();
16
17         driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/register");
18
19
20         WebElement fn = driver.findElement(By.id("input-firstname"));
21 }
```

Clearer 17-

```
driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/register");
```

Enter in first name with pause.



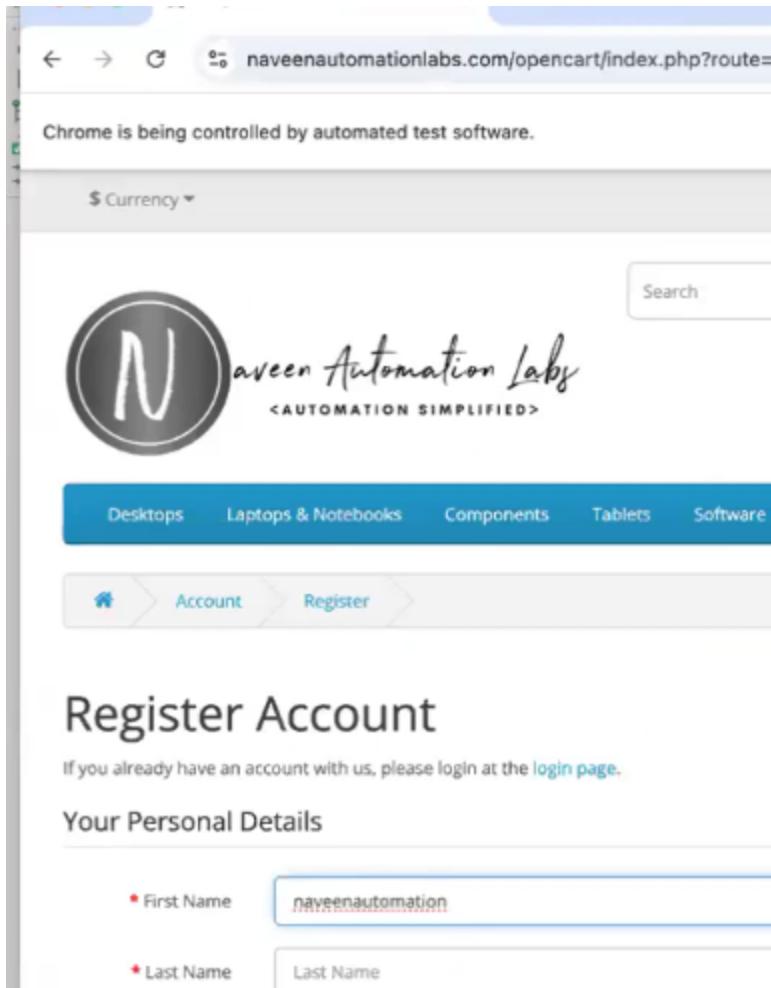
```
19
20     WebElement firstName = driver.findElement(By.id("input-firstname"));
21
22     //CharSequence: String, StringBuffer, StringBuilder
23     Actions act = new Actions(driver);
24
25     String value = "naveenautomation";
26
27     char val[] = value.toCharArray();
28     for(char ch : val) { //n->"n"
29         act.sendKeys(firstName, String.valueOf(ch)).pause(200).perform();
30     }
31 }
```

Clearer 20-

```
WebElement firstName = driver.findElement(By.id("input-firstname"));
```

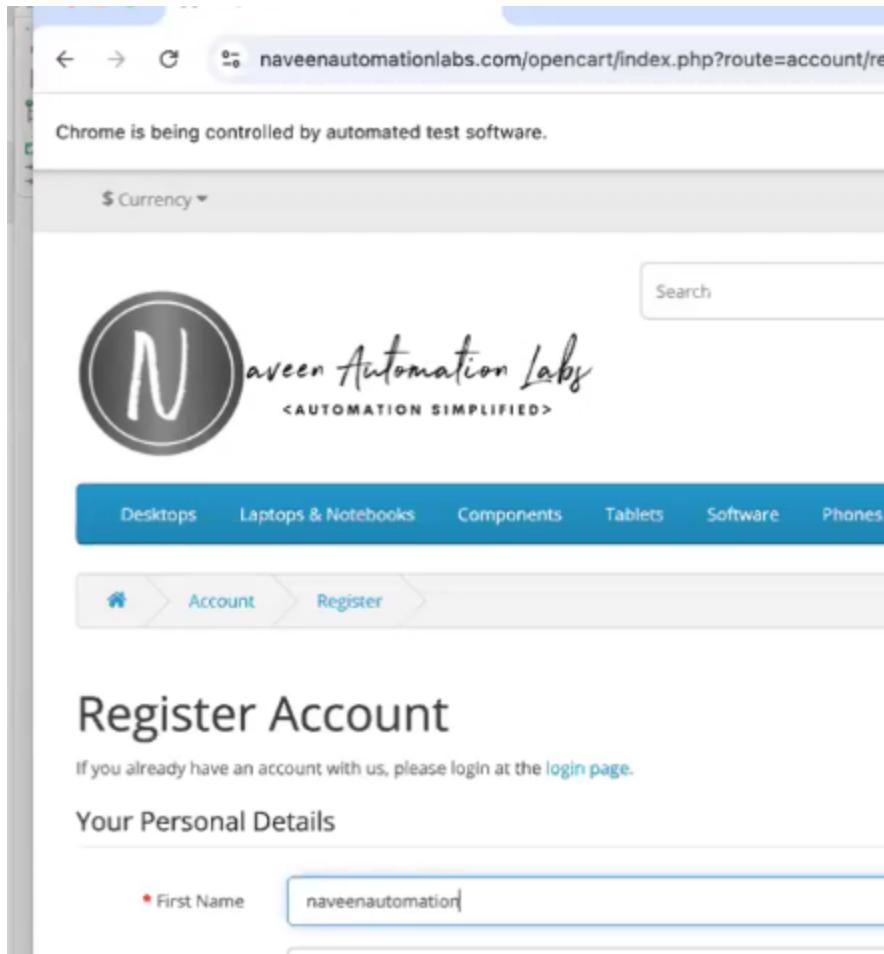
Char sequence can accept either string or buffer or builder, no character. (51.00)

Swanand got praise - 52.00.



Increase time and check-

```
26
27     char val[] = value.toCharArray();
28     for(char ch : val) { //n->"n"
29         act.sendKeys(firstName, String.valueOf(ch)).pause(500).perform();
30     }
31 }
```



Generic method-

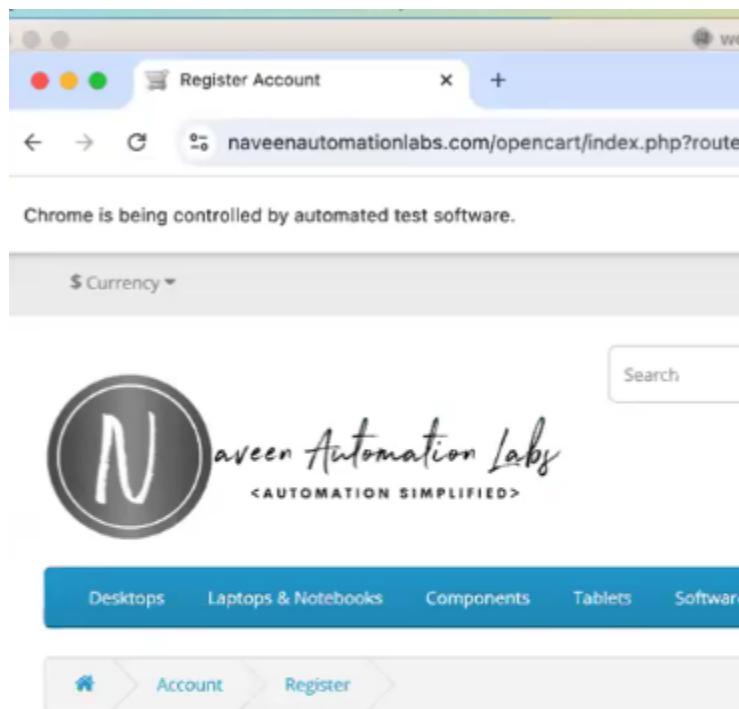
```
36= public static void doSendKeysWithPause(By locator, String value, long pauseTime) {  
37     Actions act = new Actions(driver);  
38  
39     char val[] = value.toCharArray();  
40     for(char ch : val) { //n->"n"  
41         act  
42             .sendKeys(getElement(locator), String.valueOf(ch))  
43                 .pause(pauseTime)  
44                     .perform();  
45     }  
46 }  
47  
48= public static WebElement getElement(By locator) {  
49     return driver.findElement(locator);  
50 }  
51
```

Call generic method-

```
31      By firstname = By.id("input-firstname");
32      doSendKeysWithPause(firstname, "naveen automation labs", 200);
33  }
34 }
```

Clearer 33-

```
doSendKeysWithPause(firstname, "naveen automation labs", 200);
```



Register Account

If you already have an account with us, please login at the [login page](#).

Your Personal Details

* First Name

* Last Name

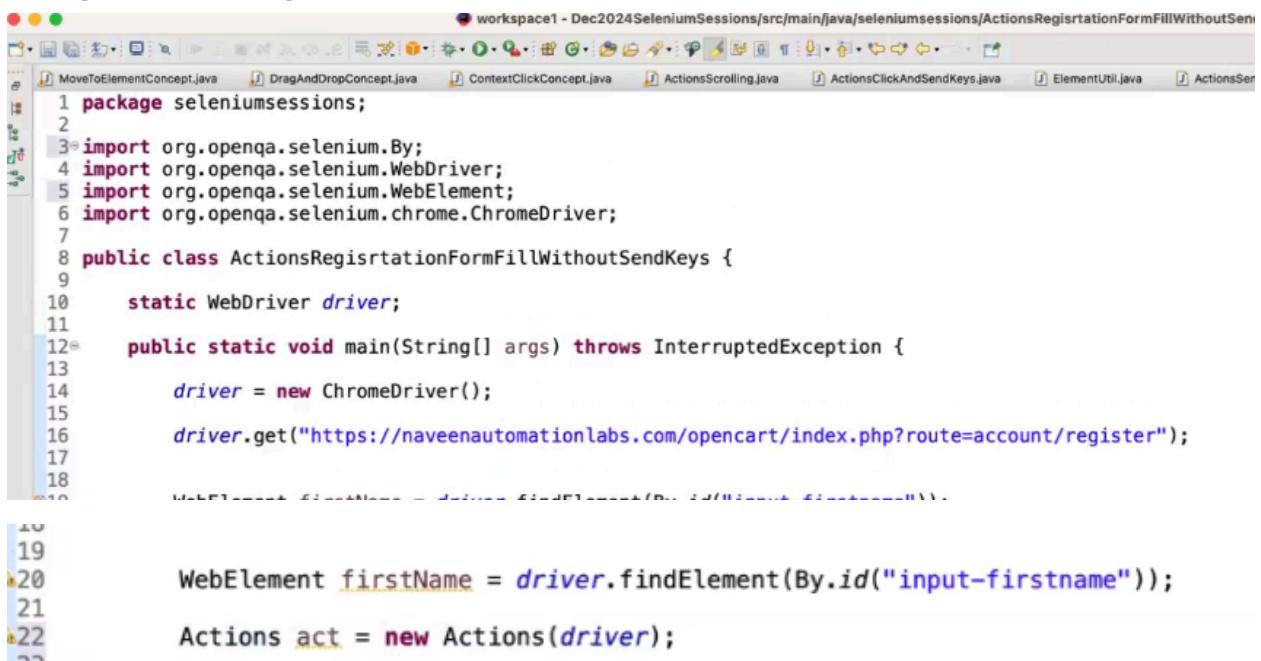
Move to element util-

```

347  public void doSendKeysWithPause(By locator, String value, long pauseTime) {
348      char val[] = value.toCharArray();
349      for(char ch : val) {
350          act
351              .sendKeys(getElement(locator), String.valueOf(ch))
352                  .pause(pauseTime)
353                      .perform();
354      }
355  }

```

Accessibility testing with tab-Naveen website.
Register page.



The screenshot shows the Eclipse IDE interface with the title bar "workspace1 - Dec2024SeleniumSessions/src/main/java/seleniumsessions/ActionsRegisrtationFormFillWithoutSendKeys.java". The code editor displays Java code for a Selenium test. The code imports org.openqa.selenium.* and org.openqa.selenium.chrome.ChromeDriver. It defines a class ActionsRegisrtationFormFillWithoutSendKeys with a main method that initializes a ChromeDriver, navigates to a registration page, and finds the first name input field using By.id("input-firstname"). It then creates an Actions object and performs a key press action on the element.

```

1 package seleniumsessions;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.WebElement;
6 import org.openqa.selenium.chrome.ChromeDriver;
7
8 public class ActionsRegisrtationFormFillWithoutSendKeys {
9
10     static WebDriver driver;
11
12     public static void main(String[] args) throws InterruptedException {
13
14         driver = new ChromeDriver();
15
16         driver.get("https://naveenautomationlabs.com/opencart/index.php?route=account/register");
17
18
19
20         WebElement firstName = driver.findElement(By.id("input-firstname"));
21
22         Actions act = new Actions(driver);

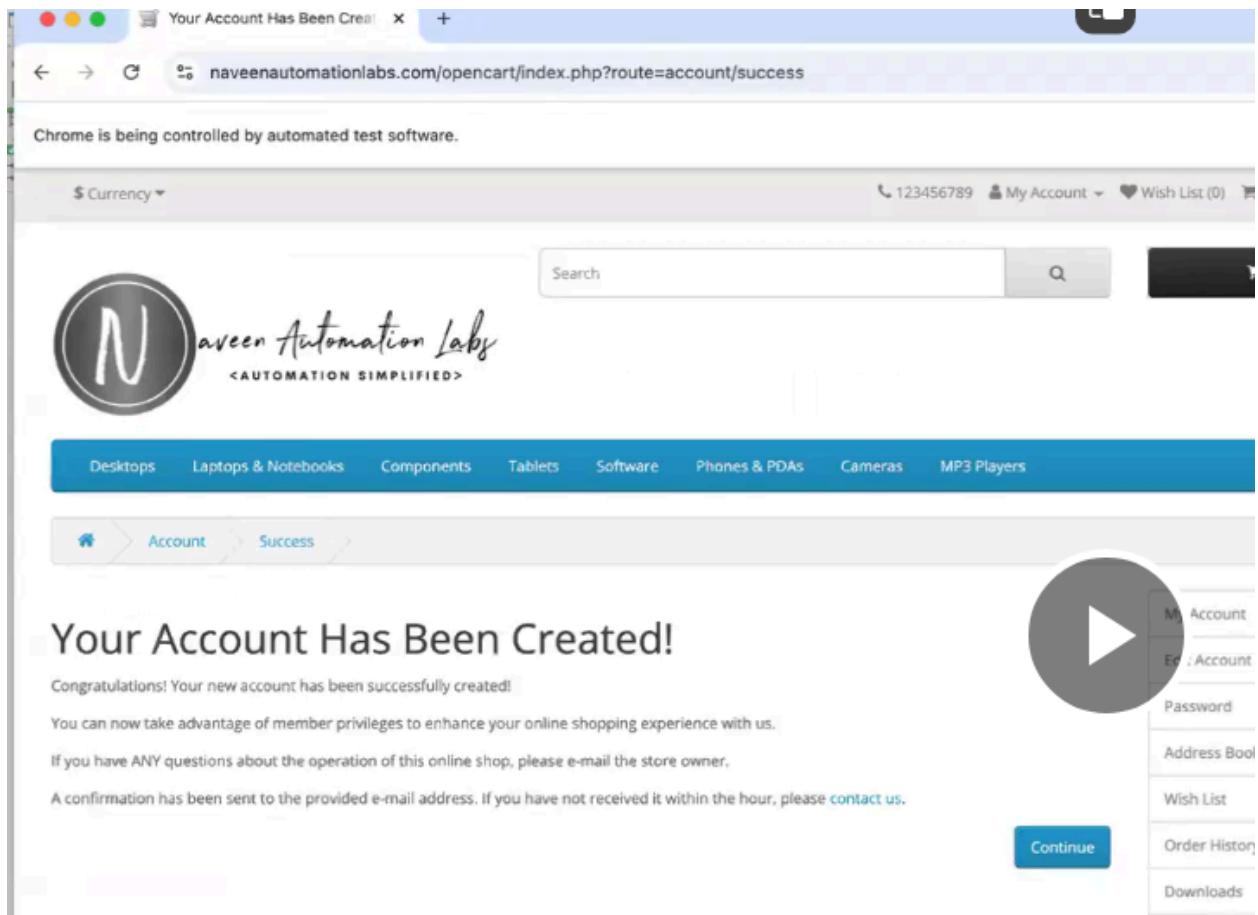
```

```
23     Actions act = new Actions(driver);
24
25     act.sendKeys(firstName, "Vishal")
26         .sendKeys(Keys.TAB)
27         .sendKeys("Mehta")
28         .sendKeys(Keys.TAB)
29         .sendKeys("vish@gmail.com")
30         .sendKeys(Keys.TAB)
31         .sendKeys("8765432123")
32         .sendKeys(Keys.TAB)
33         .sendKeys("Mehta@123")
34         .sendKeys(Keys.TAB)
35         .sendKeys("Mehta@123")
36         .sendKeys(Keys.TAB)
37         .sendKeys(Keys.TAB)
38         .sendKeys(Keys.TAB)
39         .sendKeys(Keys.SPACE)
40         .sendKeys(Keys.TAB)
41         .sendKeys(Keys.ENTER)
42             .build()
43             .perform();
```

Only one web element used. Rest all we use tab and then perform operations.

For others no need to create web element.

All details entered and continue clicked-



Give pause after every operation-

```
24  
25     act.sendKeys(firstName, "Vishal")  
26         .pause(500)  
27         .sendKeys(Keys.TAB)  
28         .sendKeys("Mehta")  
29         .pause(500)  
30         .sendKeys(Keys.TAB)  
31         .sendKeys("vish@gmail.com")  
32         .pause(500)  
33         .sendKeys(Keys.TAB)  
34         .sendKeys("8765432123")  
35         .pause(500)  
36         .sendKeys(Keys.TAB)  
37         .sendKeys("Mehta@123")  
38         .pause(500)  
39         .sendKeys(Keys.TAB)  
40         .sendKeys("Mehta@123")  
41         .pause(500)  
42         .sendKeys(Keys.TAB)  
43         .pause(500)  
44         .sendKeys(Keys.TAB)  
45         .pause(500)  
46         .sendKeys(Keys.TAB)  
47         .pause(500)  
48         .sendKeys(Keys.SPACE)  
49         .pause(500)  
50         .sendKeys(Keys.TAB)  
51         .pause(500)  
52         .sendKeys(Keys.ENTER)  
53         .pause(500)|  
54             .build()  
55             .perform();  
56
```

Register Account

naveenautomationlabs.com/opencart/index.php?route=account/register

Chrome is being controlled by automated test software.

If you already have an account with us, please login at the [login page](#).

Your Personal Details

* First Name: Vishal

* Last Name: Mehta

* E-Mail: vish@gmail.com

* Telephone: 8765432123

Your Password

* Password:
* Password Confirm:

Newsletter

Subscribe Yes No

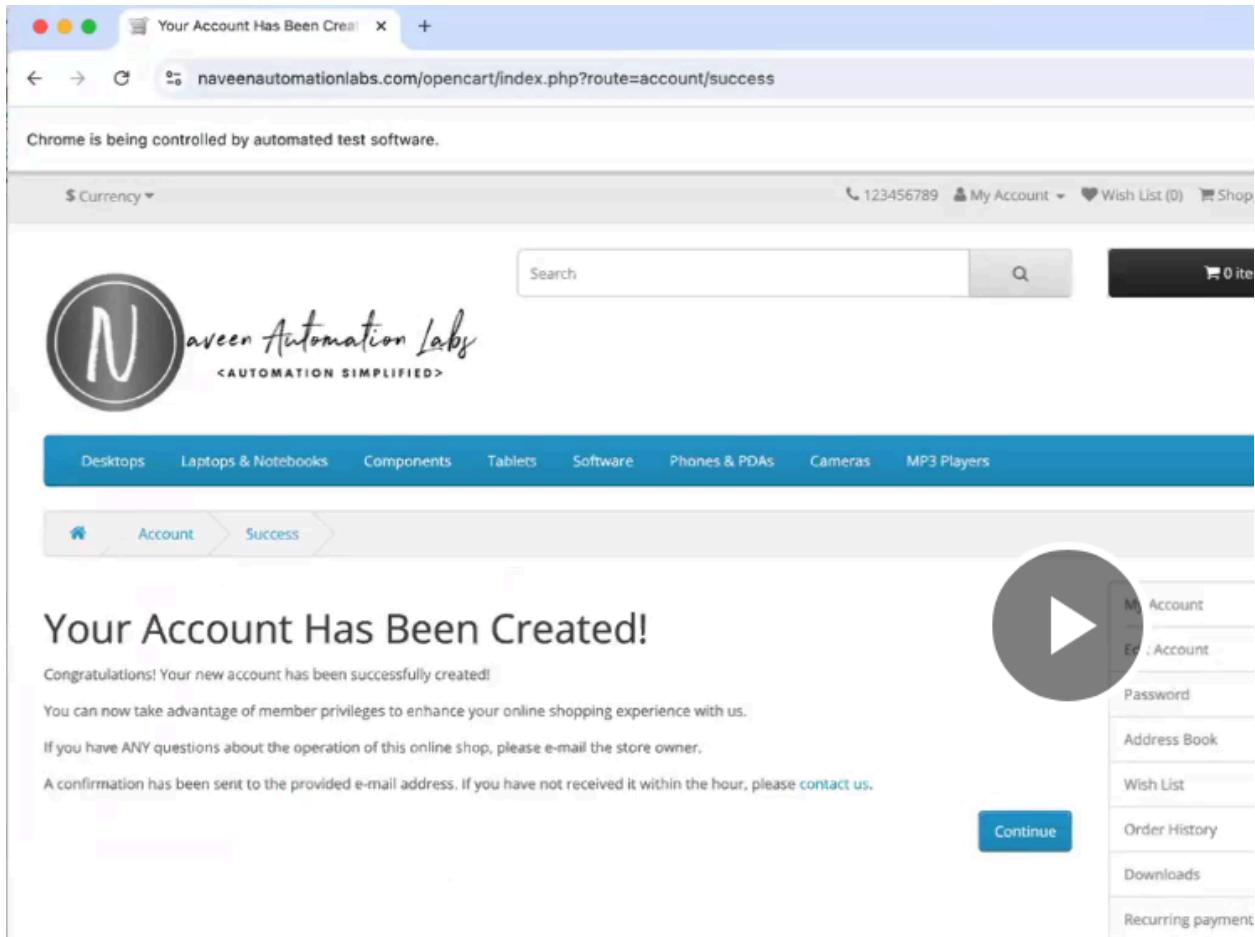
I have read and agree to the [Privacy Policy](#) Continue

Class name renamed-

```
9  
10 public class ActionsRegistrationFormFillWithTabSequence {  
11 }
```

Store build in variable and reuse when needed-

```
25
26     Action regFormAction = act.sendKeys(firstName, "Vishal")
27         .pause(500)
28         .sendKeys(Keys.TAB)
29         .sendKeys("Mehta")
30         .pause(500)
31         .sendKeys(Keys.TAB)
32         .sendKeys("vishal@gmail.com")
33         .pause(500)
34         .sendKeys(Keys.TAB)
35         .sendKeys("8765432123")
36         .pause(500)
37         .sendKeys(Keys.TAB)
38         .sendKeys("Mehta@123")
39         .pause(500)
40         .sendKeys(Keys.TAB)
41         .sendKeys("Mehta@123")
42         .pause(500)
43         .sendKeys(Keys.TAB)
44         .pause(500)
45         .sendKeys(Keys.TAB)
46         .pause(500)
47         .sendKeys(Keys.TAB)
48         .pause(500)
49         .sendKeys(Keys.SPACE)
50         .pause(500)
51         .sendKeys(Keys.TAB)
52         .pause(500)
53         .sendKeys(Keys.ENTER)
54         .pause(500)
55             .build();
56
57     regFormAction.perform();
58
```



One tip to use is create action util class and maintain all the application level actions which we can do. Example, action to search something, action to create user etc.

Created utility for standard actions- 1.12
Call by reference is being used because parameter to method is Action interface. Whatever Action you have, use that variable and call the perform method.

```

25
26     Action regFormAction = act.sendKeys(firstName, "Vishal")
27         .pause(500)
28         .sendKeys(Keys.TAB)
29         .sendKeys("Mehta")
30         .pause(500)
31         .sendKeys(Keys.TAB)
32         .sendKeys("vishal@gmail.com")
33         .pause(500)
34         .sendKeys(Keys.TAB)
35         .sendKeys("8765432123")
36         .pause(500)
37         .sendKeys(Keys.TAB)
38         .sendKeys("Mehta@123")
39         .pause(500)
40         .sendKeys(Keys.TAB)
41         .sendKeys("Mehta@123")
42         .pause(500)
43         .sendKeys(Keys.TAB)
44         .pause(500)
45         .sendKeys(Keys.TAB)
46         .pause(500)
47         .sendKeys(Keys.TAB)
48         .pause(500)
49         .sendKeys(Keys.SPACE)
50         .pause(500)
51         .sendKeys(Keys.TAB)
52         .pause(500)
53         .sendKeys(Keys.ENTER)
54         .pause(500)
55             .build();
56
57     //regFormAction.perform();
58
59     performAction(regFormAction);
60 }
61
62
63
64@ Public static void performAction(Action action) {
65     action.perform();
66 }
67
68

```

Lets try amazon-

We need to go to search box and search for something.

```
1 package seleniumsessions;
2
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.chrome.ChromeDriver;
5
6 public class AmazonAccessibilitySearchTest {
7
8     static WebDriver driver;
9
10    public static void main(String[] args) throws InterruptedException {
11
12        driver = new ChromeDriver();
13
14        driver.get("https://www.amazon.in/");
15
16
17        Actions act = new Actions(driver);
18
19        Action searchAction =
20            act.sendKeys(Keys.TAB)
21            .pause(200)
22            .sendKeys(Keys.TAB)
23            .pause(200)
24            .sendKeys(Keys.TAB)
25            .pause(200)
26            .sendKeys(Keys.TAB)
27            .pause(200)
28            .sendKeys(Keys.TAB)
29            .pause(200)
30            .sendKeys(Keys.TAB)
31            .pause(200)
32            .sendKeys("macbook pro")
33            .pause(200)
34            .sendKeys(Keys.ENTER)
35            .build();
36
37
38        searchAction.perform();
39
40    }
41}
```

Amazon.in : macbook pro

amazon.in/s?k=macbook+pro&cid=ZBQL36E73E3F&sprefix=macbook+%2Caps%2C243&ref=nb_sb_noss_2

Chrome is being controlled by automated test software.

amazon.in Delivering to Jaipur 302039 Update location All macbook pro EN Hello, sign in Account

All Fresh MX Player Sell Bestsellers Today's Deals Mobiles Prime Customer Service New Releases Electronics Fashion

1-16 of over 20,000 results for "macbook pro"

Delivery Day

- Get it Today
- Get it by Tomorrow
- Get it in 2 Days

Laptop Display Size

- 11" - 12"
- 13" - 14"
- 15" - 16"
- 17" & More

Brands

- Apple
- Spigen
- Lenovo
- Dyazo
- EooCoo
- BenQ
- MSI

[See more](#)

Notebook Computer RAM Memory Size

- 32 GB
- 16 GB
- 8 GB



Mac
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Create utility and call it-
See how to call directly without storing in variable
called ACTION. 1.22

```
38     performAction(createAmazonSearchAction("macbook pro"));
39 }
40 }
41 }
42 }
43 public static Action createAmazonSearchAction(String value) {
44     Actions act = new Actions(driver);
45
46     return
47         act.sendKeys(Keys.TAB)
48             .pause(200)
49             .sendKeys(Keys.TAB)
50             .pause(200)
51             .sendKeys(Keys.TAB)
52             .pause(200)
53             .sendKeys(Keys.TAB)
54             .pause(200)
55             .sendKeys(Keys.TAB)
56             .pause(200)
57             .sendKeys(value)
58             .pause(200)
59             .sendKeys(Keys.ENTER)
60             .build();
61 }
62 }
63
64 public static void performAction(Action action) {
65     action.perform();
66 }
67 }
```



Chrome is being controlled by automated test software.

amazon.in : macbook pro

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- 16 GB
- 8 GB

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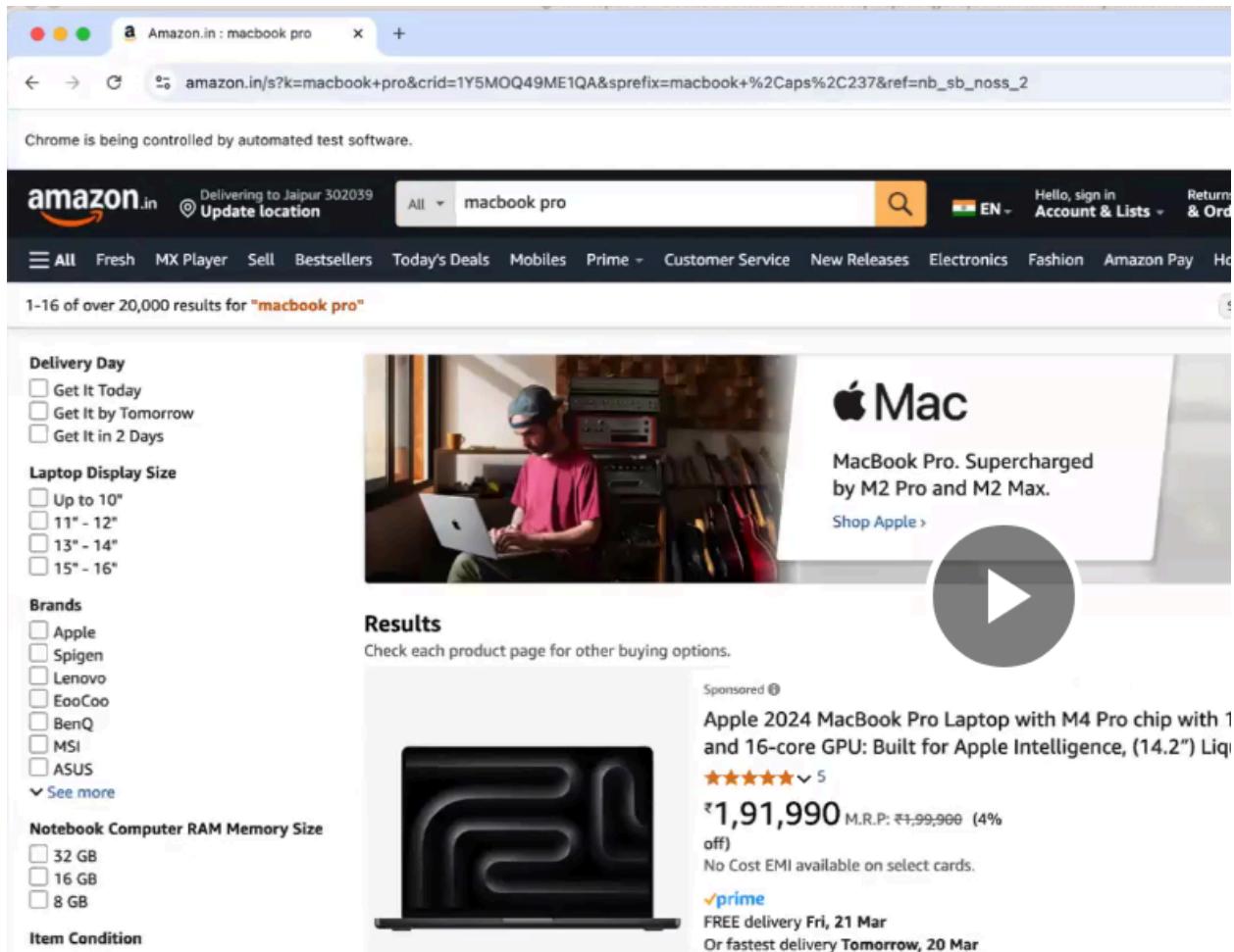
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1.12 - selenium 18 class -
Actions is recommended class by w3c accessibility
because it mimics user actions.