**API Docs:-**

<http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html>

public class **Actions**

extends java.lang.Object

The user-facing API for emulating complex user gestures. Use this class rather than using the Keyboard or Mouse directly. Implements the builder pattern: Builds a CompositeAction containing all actions specified by the method calls.

* ***Field Summary***

|  |  |
| --- | --- |
| **Fields** | |
| **Modifier and Type** | **Field and Description** |
| protected [**CompositeAction**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/CompositeAction.html) | [**action**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#action) |
| protected [**Keyboard**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Keyboard.html) | [**keyboard**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#keyboard) |
| protected [**Mouse**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Mouse.html) | [**mouse**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#mouse) |

* ***Constructor Summary***

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| **Constructors** |
| **Constructor and Description** |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#Actions-org.openqa.selenium.interactions.Keyboard-)([**Keyboard**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Keyboard.html) keyboard)  Only used by the TouchActions class. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#Actions-org.openqa.selenium.interactions.Keyboard-org.openqa.selenium.interactions.Mouse-)([**Keyboard**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Keyboard.html) keyboard, [**Mouse**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Mouse.html) mouse)  A constructor that should only be used when the keyboard or mouse were extended to provide additional functionality (for example, dragging-and-dropping from the desktop). |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#Actions-org.openqa.selenium.WebDriver-)([**WebDriver**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebDriver.html) driver)  Default constructor - uses the default keyboard, mouse implemented by the driver. |

* ***Method Summary***

|  |  |
| --- | --- |
| **All Methods**[**Instance Methods**](javascript:show(2);)[**Concrete Methods**](javascript:show(8);)[**Deprecated Methods**](javascript:show(32);) | |
| **Modifier and Type** | **Method and Description** |
| [**Action**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Action.html) | [**build**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#build--)()  Generates a composite action containing all actions so far, ready to be performed (and resets the internal builder state, so subsequent calls to build() will contain fresh sequences). |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**click**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#click--)()  Clicks at the current mouse location. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**click**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#click-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) onElement)  Clicks in the middle of the given element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**clickAndHold**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#clickAndHold--)()  Clicks (without releasing) at the current mouse location. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**clickAndHold**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#clickAndHold-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) onElement)  Clicks (without releasing) in the middle of the given element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**contextClick**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#contextClick--)()  Performs a context-click at the current mouse location. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**contextClick**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#contextClick-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) onElement)  Performs a context-click at middle of the given element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**doubleClick**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#doubleClick--)()  Performs a double-click at the current mouse location. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**doubleClick**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#doubleClick-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) onElement)  Performs a double-click at middle of the given element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**dragAndDrop**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#dragAndDrop-org.openqa.selenium.WebElement-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) source, [**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) target)  A convenience method that performs click-and-hold at the location of the source element, moves to the location of the target element, then releases the mouse. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**dragAndDropBy**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#dragAndDropBy-org.openqa.selenium.WebElement-int-int-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) source, int xOffset, int yOffset)  A convenience method that performs click-and-hold at the location of the source element, moves by a given offset, then releases the mouse. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**keyDown**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#keyDown-org.openqa.selenium.Keys-)([**Keys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/Keys.html) theKey)  Performs a modifier key press. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**keyDown**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#keyDown-org.openqa.selenium.WebElement-org.openqa.selenium.Keys-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) element, [**Keys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/Keys.html) theKey)  Performs a modifier key press after focusing on an element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**keyUp**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#keyUp-org.openqa.selenium.Keys-)([**Keys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/Keys.html) theKey)  Performs a modifier key release. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**keyUp**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#keyUp-org.openqa.selenium.WebElement-org.openqa.selenium.Keys-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) element, [**Keys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/Keys.html) theKey)  Performs a modifier key release after focusing on an element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**moveByOffset**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#moveByOffset-int-int-)(int xOffset, int yOffset)  Moves the mouse from its current position (or 0,0) by the given offset. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**moveToElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#moveToElement-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) toElement)  Moves the mouse to the middle of the element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**moveToElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#moveToElement-org.openqa.selenium.WebElement-int-int-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) toElement, int xOffset, int yOffset)  Moves the mouse to an offset from the top-left corner of the element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**pause**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#pause-long-)(long pause)  **Deprecated.**  'Pause' is considered to be a bad design practice. |
| void | [**perform**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#perform--)()  A convenience method for performing the actions without calling build() first. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**release**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#release--)()  Releases the depressed left mouse button at the current mouse location. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**release**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#release-org.openqa.selenium.WebElement-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) onElement)  Releases the depressed left mouse button, in the middle of the given element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**sendKeys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#sendKeys-java.lang.CharSequence...-)(java.lang.CharSequence... keysToSend)  Sends keys to the active element. |
| [**Actions**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html) | [**sendKeys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#sendKeys-org.openqa.selenium.WebElement-java.lang.CharSequence...-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) element, java.lang.CharSequence... keysToSend)  Equivalent to calling: *Actions.click(element).sendKeys(keysToSend).* This method is different from [**WebElement.sendKeys(CharSequence...)**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html#sendKeys-java.lang.CharSequence...-) - see[**sendKeys(CharSequence...)**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#sendKeys-java.lang.CharSequence...-) for details how. |

The keyDown() method allows the user to press or hold a specific key without releasing it. The following is the syntax for this function:

action.keyDown(Keys theKey);

The keyUp() method releases the key that is already in a pressed condition. The following is the syntax for this function:

action.keyUp(Keys theKey);

The moveByOffset() method moves the mouse pointer to a specific location using the *x* and *y* coordinates:

action.moveByOffset(int xOffset, int yOffset);

Actions action = new Actions(driver);

action.moveByOffset(**234**, **345**).build().perform();

The moveToElement() method moves the mouse pointer to a specific element. Besides this, the mouse pointer can also be moved from a source element to the target location using *xy*coordinates. The following is the syntax for this function:

action.moveToElement(WebElement source);

action.moveToElement(WebElement source, int xOffset, int yOffset);

Actions action = new Actions(driver);

WebElement source = driver.findElement(By.**locatorType("path")**);

action.moveToElement(source).build().perform();

action.moveToElement(source, 234, 345).build().perform();

The sendKeys() method controls the keyboard functions using keys. This function can also perform actions by locating elements. The following is the syntax for this function:

action.sendKeys(Keys theKeys);

action.sendKeys(Keys theKeys, Keys theKeys);

action.sendKeys(WebElement target, Keys theKeys);

[**sendKeys**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/interactions/Actions.html#sendKeys-org.openqa.selenium.WebElement-java.lang.CharSequence...-)([**WebElement**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html) element, java.lang.CharSequence... keysToSend)

Equivalent to calling: *Actions.click(element).sendKeys(keysToSend).* This method is different from [**WebElement.sendKeys(CharSequence...)**](http://selenium.googlecode.com/git/docs/api/java/org/openqa/selenium/WebElement.html#sendKeys-java.lang.CharSequence...-)

Actions action = new Actions(driver);

WebElement target = driver.findElement(By.**locatorType("path")**);

action.sendKeys(Keys.TAB).build().perform();

action.sendKeys(Keys.CONTROL, Keys.END).build().perform();

action.sendKeys(target, Keys.TAB).build().perform();

**DragNDrop:-**

WebDriver driver = new FirefoxDriver();

driver.get("http://www.theautomatedtester.co.uk/demo2.html");

WebElement drag = driver.findElement(By.className("draggable"));

Actions builder = new Actions(driver);

Action dragAndDrop = builder.dragAndDropBy(drag, 10,20).build();

dragAndDrop.perform();

### Key.chord(var\_args)

Simulate pressing many keys at once in a "chord". Takes a sequence of [webdriver.Key](http://selenium.googlecode.com/git/docs/api/javascript/enum_webdriver_Key.html)s or strings, appends each of the values to a string, and adds the chord termination key ([webdriver.Key.NULL](http://selenium.googlecode.com/git/docs/api/javascript/enum_webdriver_Key.html#NULL)) and returns the resultant string.

Refer the following link for all the available links,

<https://sites.google.com/site/seleniumworks/keyboard-actions>

**Examples:-**

The following example illustrates how we can move to the bottom of the page view using the *Ctrl* + *End* key combination and finally release the *Ctrl* key:

Actions action = new Actions(driver);

action.keyDown(Keys.CONTROL).sendKeys(Keys.END).keyUp(Keys.CONTROL).build().perform();