# Selenium: Alert, Actions, and Select - Class vs Interface

## 1. Alert

Type: Interface  
Defined In: org.openqa.selenium package.  
Purpose: Provides methods to interact with JavaScript alerts, confirms, and prompts.

### Key Methods in the Interface:

• accept()  
• dismiss()  
• getText()  
• sendKeys(String keysToSend)

### Implementation:

Selenium internally provides the implementation of the Alert interface.

## 2. Actions

Type: Class  
Defined In: org.openqa.selenium.interactions package.  
Purpose: Facilitates advanced user interactions like mouse movements, drag-and-drop, hover, and keyboard events.

### Key Methods in the Class:

• moveToElement(WebElement target)  
• contextClick(WebElement target)  
• dragAndDrop(WebElement source, WebElement target)  
• clickAndHold(WebElement target)  
• sendKeys(CharSequence... keys)

### Usage:

The Actions class is instantiated using the WebDriver instance.

## 3. Select

Type: Class  
Defined In: org.openqa.selenium.support.ui package.  
Purpose: Simplifies interactions with <select> dropdown elements in HTML.

### Key Methods in the Class:

• selectByVisibleText(String text)  
• selectByValue(String value)  
• selectByIndex(int index)  
• getOptions()  
• getFirstSelectedOption()

### Usage:

The Select class works with <select> tags and is instantiated using a WebElement representing the dropdown.

## Comparison Table

|  |  |  |
| --- | --- | --- |
| Feature | Type | Purpose |
| Alert | Interface | To interact with JavaScript alerts, confirms, and prompts. |
| Actions | Class | To perform advanced user interactions (mouse/keyboard actions). |
| Select | Class | To work with <select> dropdown elements. |