
Web Element Commands

Selenium provides a class named WebElement in order to perform the actions on elements.

- Below are the web element methods used to perform actions on elements?

Commands	Argument	Return type
Send_keys	String	Void
Click	No argument	Void
Clear	No argument	Void
Find_element	By	Web element
Find_elements	By	List<WebElement>
Is_displayed	No argument	Boolean
Is_enabled	No argument	Boolean
Is_selected	No argument	Boolean
Get_attribute	String (Attribute name)	String
Get_property	String (Attribute name)	String
Tag_name	No argument	String
Submit	No argument	No argument
Text	No argument	String
Location	No argument	Dictionary
Size	No argument	Dictionary
Rect	No argument	Dictionary
Value_of_css_property	String	String

Following are the web element commands

```
#Clicks the element.
webEle.click()
#Type the string in to the element
webEle.send_keys('enter the value')
#Clears the text if it's a text entry element.
webEle.clear()
#Checks whether the element is visible to a user.
webEle.is_displayed()
#Checks whether the element is enabled.
webEle.is_enabled()
#Checks whether the element is selected.
webEle.is_selected()
#Gets the text of the element.
webEle.text
#Gets the tag name of the element.
webEle.tag_name
#Returns the coordinates value of the element
webEle.location
```

```

#Returns the size of the element
webEle.size
#Gets the value of a CSS property.
webEle.value_of_css_property("property_name")
#Gets the given attribute or property of the element.
webEle.get_attribute("name")
#Gets the given property of the element.
webEle.get_property("name")
#A dictionary with the size and location of the element.
webEle.rect
#Submits a form.
webEle.submit()

```

Send keys

- Send keys method used to enter or type the string into the text filed.
- Send keys method takes string as an argument.

Write Script to enter the text into text box?

```

1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.get('https://demo.actitime.com/')
5 driver.implicitly_wait(500)
6
7 userNameTextField = driver.find_element_by_css_selector("input#username")
8 userNameTextField.send_keys("admin")
9 passwordTextField = driver.find_element_by_css_selector("input.textfield.pwdfield")
10 passwordTextField.send_keys("manager")
11
12 driver.close()

```

Click

- Click command is used to click on the element. [Button, link, radio button, check box etc.]
- Click method doesn't take any arguments and returns void.

```

1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('https://demo.actitime.com')
6
7 link = driver.find_element_by_link_text("Forgot your password?")
8 link.click()
9
10 driver.close()

```

Clear

- Clear function is used clear the text present in the text boxes.

Clear()

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.get('https://demo.actitime.com/')
5 driver.implicitly_wait(500)
6
7 userNameTextField = driver.find_element_by_css_selector("input#username")
8 userNameTextField.send_keys("admin")
9 passwordTextField = driver.find_element_by_css_selector("input.textfield.pwdfield")
10 passwordTextField.send_keys("manager")
11
12 userNameTextField.clear()
13 passwordTextField.clear()
14
15 driver.close()
```

Submit

- Submit function is a special function provided by the selenium to submit the forms.
- This function clicks on the button which is developed with in the form tag "<form>" and with the type property submit.

```
from selenium import webdriver

driver = webdriver.Chrome()
driver.get('https://demo.actitime.com/')
driver.implicitly_wait(50)

driver.find_element_by_css_selector("input#username").send_keys("admin")
driver.find_element_by_css_selector("input.textfield.pwdfield").send_keys("manager")
logInButton = driver.find_element_by_xpath("//input[@value='Log In']")
logInButton.submit()

driver.close()
```

Note: If you try to click on the element which is not inside the form tag. We get the below exception.

```
org.openqa.selenium.NoSuchElementException: no such element: Element was not in a form, so could not submit.
(0.3396.99)
```

Verification function.

- Below are the commands, which are used to verify the web elements.
 - ➔ Is displayed
 - ➔ Is enabled
 - ➔ Is selected
- All the above methods, verify the elements and returns Boolean value.

Is_Displayed

- This function checks the web element is visible to the user or not.
- It returns **TRUE** if the element is visible or returns **FALSE**

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('https://demo.actitime.com')
6
7 link = driver.find_element_by_link_text("Forgot your password?")
8
9 if link.is_displayed():
10     print("Element is visible")
11 else:
12     print("Element is not visible")
13
14 driver.close()
```

Is_Enabled

- This function checks for the element is enabled or not.
- Returns **TRUE** if the element is enabled or **FALSE** if element is disabled.

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('https://demo.actitime.com')
6
7 link = driver.find_element_by_link_text("Forgot your password?")
8
9 if link.is_enabled():
10     print("Element is Enabled")
11 else:
12     print("Element is not Enabled")
13
14 driver.close()
```

HTML code:

```
<html>
  <head></head><body><header>
    <title>Qspiders</title>
    <script type="text/javascript">
      $(function() {
        $("#example_0, #example_1").change(function() {
          $("#field1, #field2").val("").attr("readonly", true);
          if ($("#example_0").is(":checked")) {
            $("#field1").removeAttr("readonly");
            $("#field1").focus();
          }
          else if ($("#example_1").is(":checked")) {
            $("#field2").removeAttr("readonly");
            $("#field2").focus();
          }
        });
      });
    </script>
  </header>
  <center>
    <div class="conlabel">Have you started trading yet?</div>

    <table width="100">
      <tbody><tr>
        <td><label>
          <input onclick="document.getElementById('field1').disabled=false;document.getElementById('field2').disabled=true;" type="radio" name="example"
            value="Yes" id="example_0" required="">Yes</label></td>
      </tr>
      <tr>
        <td><label>
          <input onclick="document.getElementById('field1').disabled=true;document.getElementById('field2').disabled=false;" type="radio" name="example"
            value="No" id="example_1" required="">No</label></td>
      </tr>
    </tbody></table>
    <li>
      <div class="conlabel">If Yes, then:</div>
      <input type="text" id="field1" name="field1" placeholder="" disabled="true">
    </li><br>
    <div class="conlabel">If No, then:</div>
    <input type="text" id="field2" name="field2" placeholder="" disabled="true">
  </center>
</body></html>
```

Activate Window

Is_Selected

- This function checks if the check box or radio button is selected or not.
- If the check box or radio button is selected, it returns **TRUE** or else it returns **FALSE**.

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('https://demo.actitime.com')
6
7 checkBox = driver.find_element_by_id("keepLoggedInCheckBox")
8
9 if checkBox.is_selected():
10     print("Check box is Selected")
11 else:
12     print("Check box is not Selected")
13
14 driver.close()
```

Text:

- This function is used to get the text of an element.
- Its return type of text function is string.

```
from selenium import webdriver

driver = webdriver.Chrome()
driver.implicitly_wait(30)
driver.get('https://demo.actitime.com')

link = driver.find_element_by_link_text("Forgot your password?")

textOfAnEle = link.text
print("Text of an element is: ", textOfAnEle)

driver.close()
```

Tag_name:

- This function gets the tag name of the web element.
- Return type of tag_name is string.

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('https://demo.actitime.com')
6
7 WebEle = driver.find_element_by_link_text("Forgot your password?")
8
9 print("Tag name of the web element is: ", WebEle.tag_name)
0
1 driver.close()
```

Get_attribute:

- Gets the given attribute or property of the element.
- This method will first try to return the value of a property with the given name. If a property with that name doesn't exist, it returns the value of the attribute with the same name.
- If there's no attribute with that name, ``none`` is returned.

Args:

- Name - Name of the attribute/property to retrieve.

Script to get the value present in the text box.

Write a script to get the attribute value

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.get('https://demo.actitime.com/')
5 driver.implicitly_wait(500)
6
7 userNameTextField = driver.find_element_by_css_selector("input#username")
8 userNameTextField.send_keys("admin")
9 passwordTextField = driver.find_element_by_css_selector("input.textfield.pwdfield")
10 passwordTextField.send_keys("manager")
11
12 print("Text present in the user name text field is: ", userNameTextField.get_attribute("value"))
13 print("Text present in the password text field is: ", passwordTextField.get_attribute("value"))
14
15 driver.close()
```

Console Debug
Get_attribute.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Text present in the user name text field is: admin
Text present in the password text field is: manager

Write a script to get the attribute value

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.get('https://demo.actitime.com/')
5 driver.implicitly_wait(500)
6
7 userNameTextField = driver.find_element_by_css_selector("input#username")
8 userNameTextField.send_keys("admin")
9 passwordTextField = driver.find_element_by_css_selector("input.textfield.pwdfield")
10 passwordTextField.send_keys("manager")
11
12 print("ID attribute value of user name: ", userNameTextField.get_attribute("id"))
13 print("Name attribute value if password: ", passwordTextField.get_attribute("name"))
14
15 driver.close()
```

Console Debug
Get_attribute_BackEnd.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
ID attribute value of user name: username
Name attribute value if password: pwd

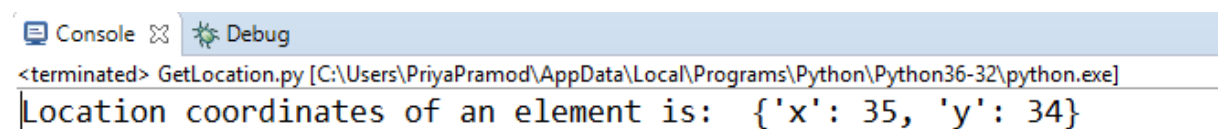
Location:

- This function returns the location coordinates of a web element.
- It returns the x and y coordinates of a web element.

```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
6
7 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
8 loc = username.location
9
0 print("Location coordinates of an element is: ",loc)
1
2 driver.quit()
```

The return type of location method is set of value.

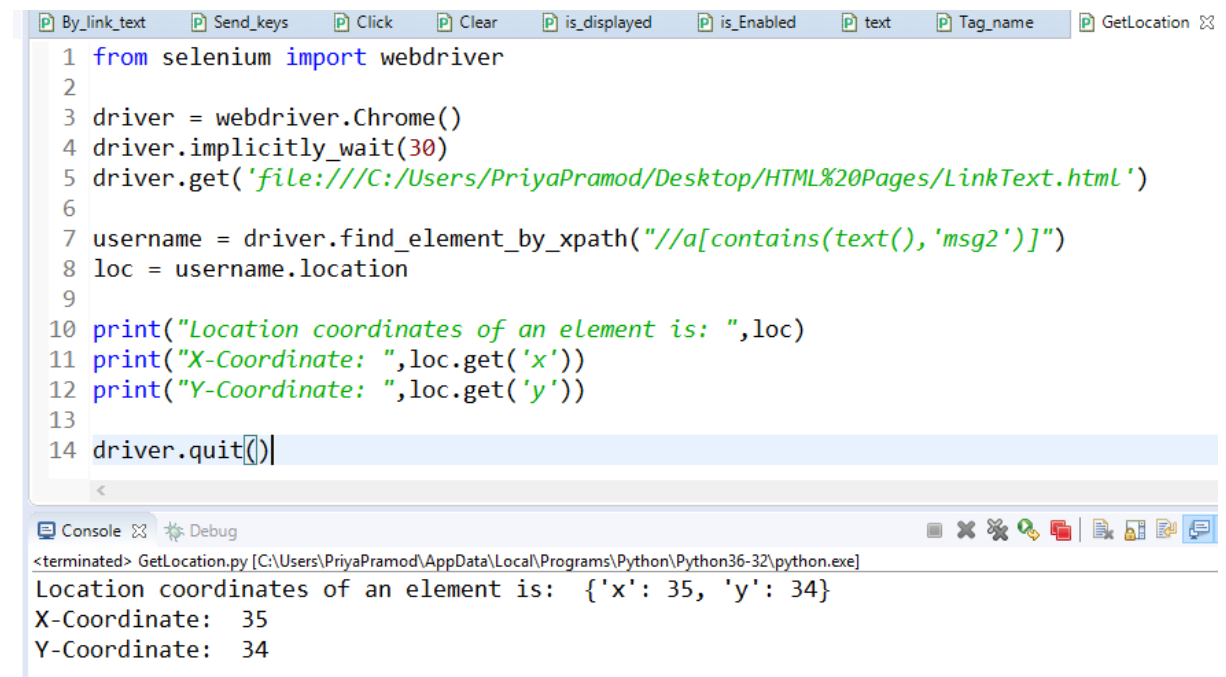
Example:



The screenshot shows a console window with the following output:

```
<terminated> GetLocation.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Location coordinates of an element is: {'x': 35, 'y': 34}
```

- If you want to get only x or y coordinates from the web element.
- We use **get** function to get only x or y coordinate value.



The screenshot shows a code editor with the following code:

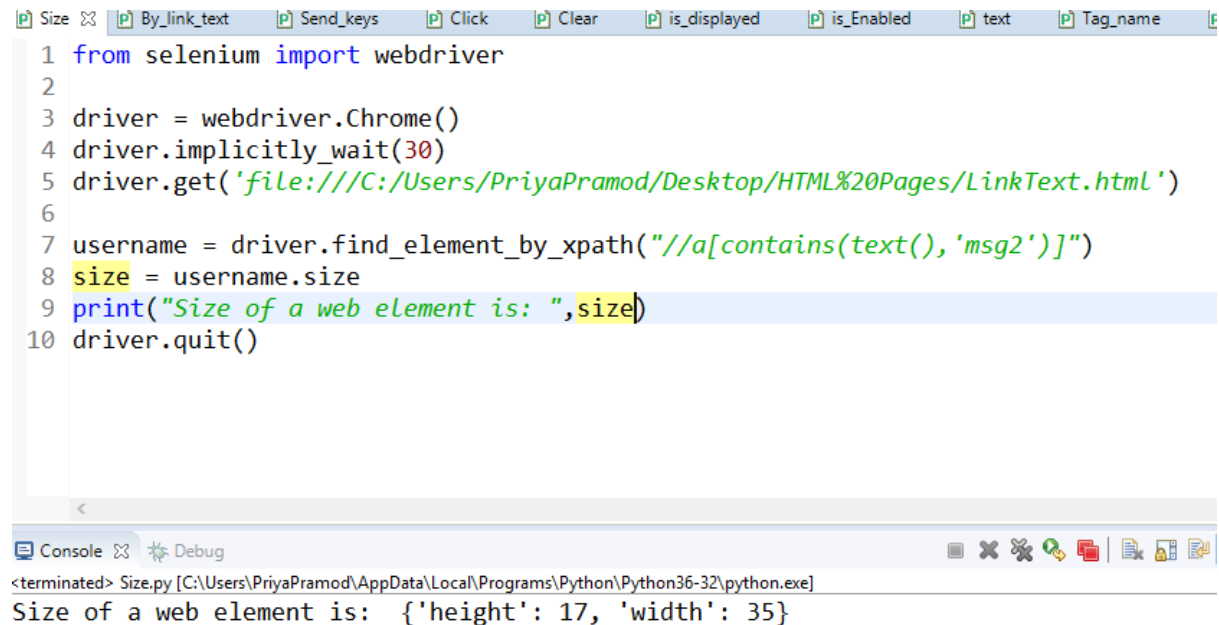
```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
6
7 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
8 loc = username.location
9
10 print("Location coordinates of an element is: ",loc)
11 print("X-Coordinate: ",loc.get('x'))
12 print("Y-Coordinate: ",loc.get('y'))
13
14 driver.quit()
```

The console output shows:

```
<terminated> GetLocation.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Location coordinates of an element is: {'x': 35, 'y': 34}
X-Coordinate: 35
Y-Coordinate: 34
```


Size:

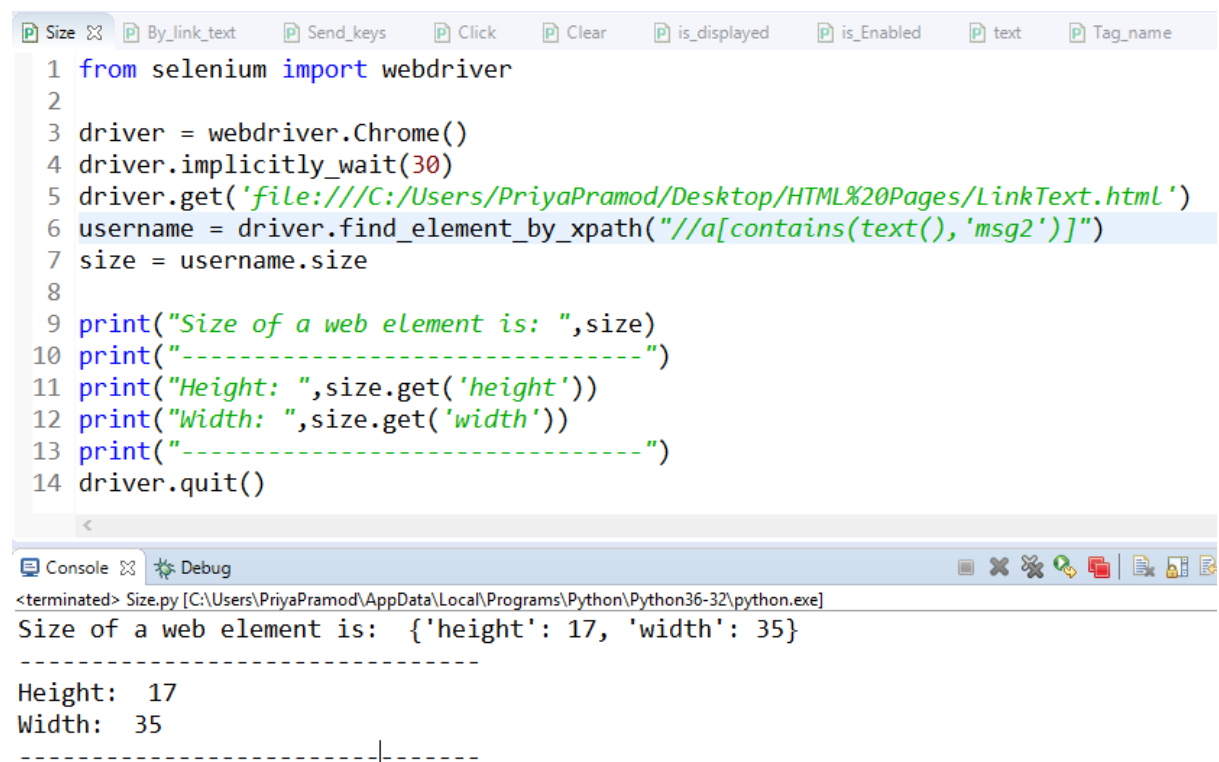
- Size function returns the size of an element (ie height and width).



```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
6
7 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
8 size = username.size
9 print("Size of a web element is: ",size)
10 driver.quit()
```

<terminated> Size.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Size of a web element is: {'height': 17, 'width': 35}

- If you want to get only height or width of a web element. Use a get method and pass an argument height or width.



```
1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
6 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
7 size = username.size
8
9 print("Size of a web element is: ",size)
10 print("-----")
11 print("Height: ",size.get('height'))
12 print("Width: ",size.get('width'))
13 print("-----")
14 driver.quit()
```

<terminated> Size.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Size of a web element is: {'height': 17, 'width': 35}

Height: 17
Width: 35
-----|-----

Rect:

- This function gets the size and location of the element.
- This function works in Mozilla. On chrome browser, this function won't work.

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```

1 from selenium import webdriver
2
3 driver = webdriver.Firefox()
4 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
5 driver.implicitly_wait(30)
6
7 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
8 rect = username.rect
9
10 print("Size and location of the element is: ",rect)
11
12 driver.quit()

```

Console <terminated> rect.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Size and location of the element is: {'x': 35.0, 'y': 35.5, 'width': 34.68333435058595, 'height': 19.0}

```

1 from selenium import webdriver
2
3 driver = webdriver.Firefox()
4 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
5 driver.implicitly_wait(30)
6 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
7 rect = username.rect
8
9 print("Size and location of the element is: ",rect)
10 print("Height of an element is: ", rect.get('height'))
11 print("Width of an element is: ", rect.get('width'))
12 print("-----")
13 print("x-coordinate of an element is: ", rect.get('x'))
14 print("y-coordinate of an element is: ", rect.get('y'))
15
16 driver.quit()

```

Console <terminated> rect.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
Size and location of the element is: {'x': 35.0, 'y': 35.5, 'width': 34.68333435058595, 'height': 19.0}
Height of an element is: 19.0
Width of an element is: 34.68333435058595

x-coordinate of an element is: 35.0
y-coordinate of an element is: 35.5

Value_of_css_property:

- In order to get the CSS property value of any web element. This function is used to get the CSS property value.
- Example: Font-size, colour of web element.

```

1 from selenium import webdriver
2
3 driver = webdriver.Chrome()
4 driver.implicitly_wait(30)
5 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/LinkText.html')
6
7 username = driver.find_element_by_xpath("//a[contains(text(),'msg2')]")
8 Elecolor = username.value_of_css_property("color")
9 print(Elecolor)
10 driver.quit()

```

Console <terminated> GetCSSValue_color.py [C:\Users\PriyaPramod\AppData\Local\Programs\Python\Python36-32\python.exe]
rgba(0, 0, 238, 1)

