

Select Class

- Just like CheckBox & Radio Buttons, List box & Multiple Select List Box Operations also works together and almost the same way.
- To perform any action, the first task is to identify the element group. As DropDown/Multiple Select is not a single element.
- They always have a single name but and they contains one or more than one elements in them. We should rather say more than one option in DropDown and Multiple Select.
- The only difference between these two is deselecting statement & multiple selections are not allowed on DropDown. Let's look at the different operations:

Drop down/List box handling:

- It is a normal operation like selecting any other type of element on a web page. We can choose ID, NAME, CLASS, CSS & XPATH etc. But to perform any operation on this element it is required import the following module.

```
from selenium.webdriver.support.select import Select
```

- And to use it we need to create a new SELECT object.

```
Select()
```

- Select is class which is provided by selenium to perform multiple operations on drop down/list box or multi select list box.
- Select class object receives the "WEB ELEMENT" as argument.
- First we need to identify the List box/Drop down element. That element we need to pass to "SELECT" class as an argument.

```
dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)
```

- Following are the methods provided by the select class to perform the operation on drop down/list box.

```

select.select_by_index("index")
select.select_by_value("value")
select.select_by_visible_text("text")
select.all_selected_options
select.first_selected_option
select.is_multiple
select.options
select.deselect_by_index("index")
select.deselect_by_value("value")
select.deselect_by_visible_text("text")
select.deselect_all()

```

Below is the sample HTML code

```

<!DOCTYPE html>
<html>
  <head>
    <title>HTML select Tag</title>
  </head>
  <body>
    <form action="/cgi-bin/dropdown.cgi" method="post">
      <select name="dropdown">
        <option value="Data Structures" >Data Structures</option>
        <option value="Data Mining">Data Mining</option>
        <option value="Java">Core Java</option>
        <option value="Sele" selected>Selenium</option>
        <option value="py">Python</option>
        <option value="app">Appium</option>
        <option value="ptest">PyTest</option>
      </select>
      <input type="submit" value="Submit" />
    </form>
  </body>
</html>

```

Select_by_index (Index) -> this method takes index as an argument to select the options from the drop down/list box.

Script to select the option using select by index?

```

from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)

select.select_by_index(2)

driver.close()

```

Select_by_value ("Value") -> this method takes the backend attribute value for selecting the option from the list box.

Script to select the option from the list box using value?

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)

select.select_by_value("ptest")

driver.close()
```

Select_by_visible_text ("text") -> this method select the options from the list box by visible text.

Script to select the option from the list box using visible text?

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)

select.select_by_visible_text("Python")

driver.close()
```

Script to verify whether the list box is single select or mutli select?

Note:

1. We use **is_Multiple ()** methods present in Select class.
2. Returns **TRUE**, if the list box is multi-select list box

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)

if select.is_multiple:
    print("List box is a multi select list box")
else:
    print("List box is a single select list box")

driver.close()
```

Write a script to count the number of options present in the list box?

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)

allOptions = select.options

print("Total number of options present in the list box is: ",len(allOptions))

driver.close()
```

Write a script print all the options present in the list box?

```
1 from selenium import webdriver
2 from selenium.webdriver.support.select import Select
3
4 driver = webdriver.Chrome()
5 driver.maximize_window()
6 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/SelectDropdown.html')
7 driver.implicitly_wait(30)
8
9 dropDownEle = driver.find_element_by_name('dropdown')
10 select = Select(dropDownEle)
11
12 allOptions = select.options
13
14 for option in allOptions:
15     print(option.text)
16
17 driver.close()
```

Sample HTML for developing the multi-select list box

```
<html>
<head>
<title>Multi select Drop Down List Box</title>
</head>
<body>
<p>What all devices do you listen to music on?</p>
<select name="Mobdevices" multiple="multiple">
<option value="0"> Please select</option>
<option value="1">iPhone</option>
<option value="2">Nokia</option>
<option value="3">Samsung</option>
<option value="4">HTC</option>
<option value="5">BlackBerry</option>
</select>
</body>
</html>
```

Write a script to select all the options present in the list box and deselect all the option

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/multiSelect.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('Mobdevices')
select = Select(dropDownEle)

allOptions = select.options

for option in allOptions:
    select.select_by_visible_text(option.text)

select.deselect_all()

driver.close()
```

Write a script to select the options and deselect by deselect by index, value and visible text?

```
1 from selenium import webdriver
2 from selenium.webdriver.support.select import Select
3
4 driver = webdriver.Chrome()
5 driver.maximize_window()
6 driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/multiSelect.html')
7 driver.implicitly_wait(30)
8
9 dropDownEle = driver.find_element_by_name('Mobdevices')
10 select = Select(dropDownEle)
11
12 select.select_by_index(2)
13 select.select_by_value("4")
14 select.select_by_visible_text("BlackBerry")
15
16 select.deselect_by_index(2)
17 select.deselect_by_value("4")
18 select.deselect_by_visible_text("BlackBerry")
19
20 driver.close()
```

Write a script to get the first select option from the list box.

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/multiSelect.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('Mobdevices')
select = Select(dropDownEle)

select.select_by_index(2)
select.select_by_value("4")
select.select_by_visible_text("BlackBerry")

ele = select.first_selected_option

print("First selected option is: ", ele.text)

driver.close()
```

Write a script to get all the selected option from the list box?

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///C:/Users/PriyaPramod/Desktop/HTML%20Pages/Folder/multiSelect.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('Mobdevices')
select = Select(dropDownEle)

select.select_by_index(2)
select.select_by_value("4")
select.select_by_visible_text("BlackBerry")

selected_options = select.all_selected_options

for option in selected_options:
    print(option.text)

driver.close()
```

Write a program to search for the specified option from the drop down.

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

found = False
serach_item = "Selenium"

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///D:/HTML%20Pages/Practice/ListBox/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)
all_options = select.options

print("Searching.....")
for option in all_options:
    value = option.text
    if value == serach_item:
        found = True
        break

if found:
    print(serach_item + " Found")
else:
    print(serach_item + " Not Found")

driver.close()
```

Write a program to get all the option from the drop down, sort all the option and print

```
from selenium import webdriver
from selenium.webdriver.support.select import Select

driver = webdriver.Chrome()
driver.maximize_window()
driver.get('file:///D:/HTML%20Pages/Practice/ListBox/SelectDropdown.html')
driver.implicitly_wait(30)

dropDownEle = driver.find_element_by_name('dropdown')
select = Select(dropDownEle)
all_options = select.options

#Creating the empty list
all_text = []
print("Searching.....")
for option in all_options:
    #Getting the text from the web element
    value = option.text
    #Adding the value to the list
    all_text.append(value)

#Sorting the list in ascending order
all_text.sort()

#Printing the sorted values
for text in all_text:
    print(text)

driver.close()
```

Note:

1. If the specified option is not in the drop down means, we will get the "NoSuchElementException".
2. If the specified option is duplicate, select class will always performs the operation of the first matched option.

Very Important:

- We can use the select class to perform the operation on the drop downs, if it is only developed using the "Select" tag.
- If the drop down is developed without using the select tag. Than such kind of drop down cannot be handled by the "Select" class.
- If we try to use "Select" class on the drop downs which is not built using the "Select" tag. Selenium web driver will through the below exception.

OSS
n" [org.openqa.selenium.support.ui.UnexpectedTagNameException](#): Element should have been "select" 10.0', revision: '176b4a9', time: '2018-03-02T19:11:12.151Z'

- Then, in order to handle the drop downs which is built without using the drop downs.
- Drop downs which is built without using the select tag are called as customised drop downs.
- In order to handle the customized drop downs, we use web elements commands only.

Customized drop down

- Drop downs which is developed without using the select tags are called as customized drop downs.
- In order to handle the customized drop downs, we have to identify each and every elements using “Find Element” or “Find Elements” and have to perform the operations using web element commands.

Handling Suggestions

- Auto suggestions are the automatically generated suggestions by the server based on searching criteria.

Example:

- If we try to search java in google it will give suggestions like
 1. Java tutorial
 2. Java interview questions ETC.
- To handle the auto suggestions, we use find elements to identify all the auto suggestion elements and performs the operation on the single element.

Example:

1. Open the browser
2. Go to google
3. Type JAVA in the search text box
4. Find all the auto suggestion given by the google
5. Print the count
6. Print the text of all the auto suggestion
7. Select the 6th auto suggestion


```
from selenium import webdriver
|
driver = webdriver.Chrome()
driver.maximize_window()
driver.get('https://www.google.com/')
driver.implicitly_wait(30)

search_box = driver.find_element_by_name("q")
search_box.send_keys("selenium")

all_options = driver.find_elements_by_xpath("//ul[@role='listbox']/li")

for option in all_options:
    print(option.text)

sixth_element = all_options[5]
sixth_element.click()

driver.close()
```

Assignment on autosuggestions

1. Go to "yatra.com"
2. Enter the city name in "From" text box and handle the auto suggestion drop down