Selenium and Python: Lab2

**Locators:**

Locators in Selenium WebDriver provide mechanisms for identifying HTML elements on the page. [Selenium](https://www.lambdatest.com/selenium" \t "_blank) supports a number of different web locators, and you have to choose the one that meets your test requirements.

Selenium WebDriver provides the findElement() and findElements() method to locate the WebElements using the appropriate web locator.

list of locators of Selenium WebDriver:

|  |  |  |
| --- | --- | --- |
| **Locator** | **Description** | **Syntax** |
| ID | Identify the WebElement using the *ID* attribute | driver.find\_element(By.ID,“IdValue”); |
| Name | Identify the WebElement using the *Name* attribute | driver. find\_element (By.NAME,“nameValue”); |
| ClassName | Use the *Class* attribute for identifying the object | driver. find\_element (By.CLASS\_NAME,“classValue”); |
| LinkText | Use the text in hyperlinks to locate the WebElement | driver. find\_element (By.LINK\_TEXT,“textofLink”); |
| Partial LinkText | Use a part of the text in hyperlinks to locate the desired WebElement | driver.find\_element (By.PARTIAL\_LINK\_TEXT,“PartialTextofLink”); |
| TagName | Use the TagName to locate the desired WebElement | driver find\_element (By.TAG\_NAME,“htmlTag”); |
| CssSelector | CSS used to create style rules in web page is leveraged to locate the desired WebElement | driver. find\_element (By.CSS\_SELECTOR,“cssValue”); |
| XPath | Use XPath to locate the WebElement | driver. find\_element (By.XPATH,“xpathValue”); |

The CSS selector and Xpath are customized locators. Therefore, you will not be able to find them directly in the HTML file.

CSS\_SELECTOR:

* Tag and ID
* TAG and CLASS
* TAG and ATTRIBUTE
* TAG, CLASS, and ATTRIBUTE

Exercise one: using class name, tag name, link text and partial link text

import time  
from selenium import webdriver  
from selenium.webdriver.chrome.service import Service  
from selenium.webdriver.common.by import By  
  
serv\_obj=Service("C:/Users/belayneshbiadgilign/Desktop/chromedriver")  
driver=webdriver.Chrome(service=serv\_obj)  
driver.get("https://uskudar.edu.tr")  
  
driver.maximize\_window()  
elementsByClassName=driver.find\_elements(By.CLASS\_NAME,"swiper-slide")  
elementsByTagName=driver.find\_elements(By.TAG\_NAME,'a')  
print(len(elementsByClassName))  
print(len(elementsByTagName))  
link=driver.find\_element(By.LINK\_TEXT,"Duyurular")  
new\_link=driver.find\_elements(By.PARTIAL\_LINK\_TEXT,"INTER")  
print(len(new\_link))  
#new\_link.click()  
link.click()  
time.sleep(20)

exercise Two: using assertions

from selenium import webdriver  
from selenium.webdriver.chrome.service import Service  
from selenium.webdriver.common.keys import Keys  
objj=Service("C:/Users/belayneshbiadgilign/Desktop/chromedriver")  
driver=webdriver.Chrome(service=objj)  
driver.get("https://python.org")  
#print(driver.title)  
assert "Python" in driver.title  
driver.implicitly\_wait(20)  
assert "No results found." not in driver.page\_source  
driver.close()

Exercise 3: using customized locators

import time  
  
from selenium import webdriver  
from selenium.webdriver.chrome.service import Service  
from selenium.webdriver.common.by import By  
obj=Service("C:/Users/belayneshbiadgilign/Desktop/chromedriver")  
driver=webdriver.Chrome(service=obj)  
driver.get("https://facebook.com")  
# tag and id: tagname#valueofid  
#tag and class : tagname.class  
#tag and attribute:tagname[attribute=value]  
#tag,class and attribute: tag.valueofclass[attribute=value]:Exercise  
#inspect the username text field  
userName=driver.find\_element(By.CSS\_SELECTOR,"input#email")  
userName.send\_keys("Belaynesh")  
userName2=driver.find\_element(By.CSS\_SELECTOR,"input.inputtext")  
userName.clear()  
userName2.send\_keys("Belaynesh")  
userName2.clear()  
userName3=driver.find\_element(By.CSS\_SELECTOR,"input[data-testid=royal\_email]")  
userName3.send\_keys("Sami")  
time.sleep(20)

using xpath: xml path used to identify an element from the DOM

Absolute/full xpath: starts from the root node

/html/body/header/div/nav[1]/div[2]/div/div/div[1]/ul/li[1]/a/i

Relative/partial xpath

//\*[@id="home"]/div/nav[1]/div[2]/div/div/div[1]/ul/li[1]/a/I

import time  
  
from selenium import webdriver  
from selenium.webdriver.chrome.service import Service  
from selenium.webdriver.common.by import By  
obj=Service("C:/Users/belayneshbiadgilign/Desktop/chromedriver")  
driver=webdriver.Chrome(service=obj)  
driver.get("https://www.uskudar.edu.tr")  
elementt=driver.find\_element(By.XPATH,"/html/body/header/div/nav[1]/div[2]/div/div/div[2]/div/form/div/input")  
elementt.send\_keys("Belaynesh")  
time.sleep(20)