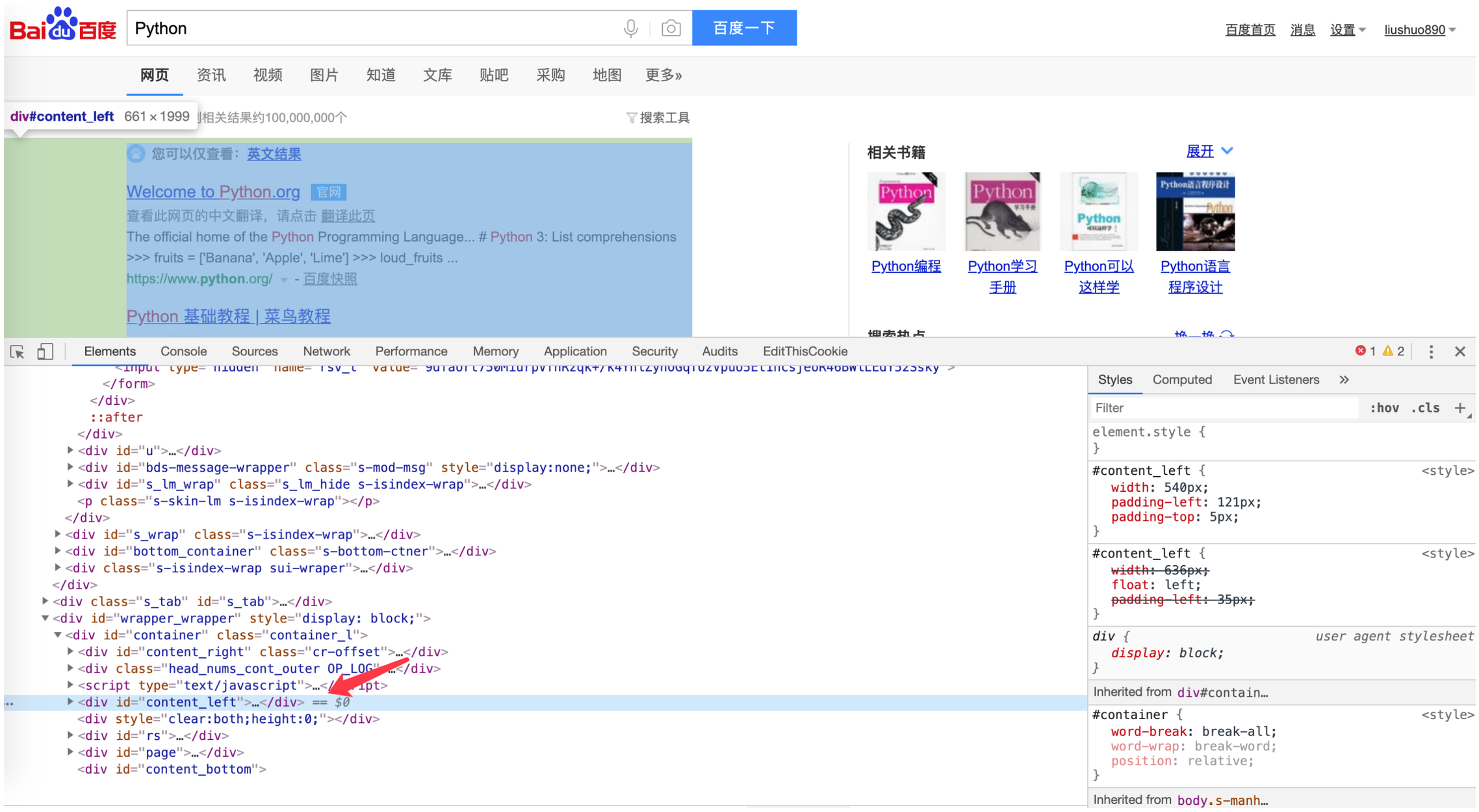
Selenium操作网页元素

一个简单的例子，通过selenium打开chrome浏览器，并输入关键字进行信息查询.

In [ ]:
```
from selenium import webdriver
from selenium.webdriver.common.by import By
from selenium.webdriver.common.keys import Keys
from selenium.webdriver.support import expected_conditions as EC
from selenium.webdriver.support.wait import WebDriverWait
import time
browser=webdriver.Chrome()
try:
    browser.get("https://www.baidu.com") #打开百度首页
    input=browser.find_element_by_id("kw")  #在首页中寻找一个id为kw的元素
    input.send_keys("Python")  #在kw元素的文本框中输入Python
    input.send_keys(Keys.ENTER) #模拟点击回车按钮进行WEB请求
    wait=WebDriverWait(browser,10) #等待10秒时间
    wait.until(EC.presence_of_element_located((By.ID,"content_left")))  #等待页面中出现一个ID叫做content_left的元素，此时
    #搜索结果加载完成.
    print(browser.current_url)
    print(browser.get_cookies())
    print(browser.page_source)
    time.sleep(10)
finally:
    browser.close()
```

效果:



筛选单个元素：

In [ ]:
```
from selenium import webdriver
from selenium.webdriver.common.by import By
browser=webdriver.Chrome()
browser.get("http://www.taobao.com")
input_first=browser.find_element_by_id("q")  ##淘宝搜索框的input标签ID配q
input_second=browser.find_element_by_css_selector("#q") ##选择ID等于q的所有元素
input_third=browser.find_element(By.ID, "q") #选择ID为的所有元素
print(input_first)
print(input_second)
print(input_third)
browser.close()
```

筛选多个元素：

In [ ]:
```
from selenium import webdriver
from selenium.webdriver.common.by import By
browser=webdriver.Chrome()
browser.get("http://www.taobao.com")
lis=browser.find_element_by_css_selector("li")
lis_c=browser.find_element(By.CSS_SELECTOR, "li")
print(lis)
print(lis_c)
browser.close()
```

In [ ]: 元素的交互操作：

In [ ]:
```
from selenium import webdriver
from selenium.webdriver import ActionChains
import time
from selenium.webdriver.common.alert import Alert
browser=webdriver.Chrome()
url="https://www.runoob.com/try/try.php?filename=jqueryui-api-droppable"
browser.get(url)
#切换到目标元素所在的frame
browser.switch_to.frame("iframeResult")
#确定拖拽目标的起点
source=browser.find_element_by_id("draggable")
#确定拖拽目标的终点
target=browser.find_element_by_id("droppable")
#形成动作链
actions=ActionChains(browser)
actions.drag_and_drop(source,target)
#执行
actions.perform()
```

In [ ]: 执行javascript，将滚动条拖至底部，并执行一句JS代码.

In [ ]:
```
from selenium import webdriver
browser=webdriver.Chrome()
browser.get("https://www.zhihu.com/explore")
browser.execute_script("window.scrollTo(0,document.body.scrollHeight)")
browser.execute_script("alert('To Button')")
browser.close()
```

In [ ]: Cookie处理

In [ ]:
```
from selenium import webdriver
import time

browser=webdriver.Chrome()
browser.get("https://www.zhihu.com/explore")
print(browser.get_cookies())
browser.add_cookie({"name":"name","domain":"www.zhihu.com","value":"germey"})
print(browser.get_cookies())
browser.delete_all_cookies()
print(browser.get_cookies())
browser.close()
```

异常处理：

In [ ]:
```
from selenium import webdriver
from selenium.common.exceptions import TimeoutException,NoSuchElementException
browser=webdriver.Chrome()
try:
    browser.get("https://www.zhihu.com/explore")
except TimeoutException:
    print("Time out")
try:
    browser.find_element_by_id("hello")
except NoSuchElementException:
    print("No Element")
finally:
    browser.close()
```