

Лабораторная 2. Часть 2. Работа с Selenium.

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1) Шаг 1. Установка Selenium

```
wget https://dl.google.com/linux/direct/google-chrome-stable_current_amd64.deb
```

```
sudo apt-get install -y ./google-chrome-stable_current_amd64.deb
```

```
sudo apt-get -y install python3-pip
```

```
pip3 install selenium
```

```
pip3 install webdriver-manager
```

```
dba@dba-vm:~$ wget https://dl.google.com/linux/direct/google-chrome-stable_current_amd64.deb
--2024-09-29 22:27:52-- https://dl.google.com/linux/direct/google-chrome-stable_current_amd64.deb
Resolving dl.google.com (dl.google.com)... 142.250.180.78, 2a00:1450:4008:804::200e
Connecting to dl.google.com (dl.google.com)[142.250.180.78]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 111860972 (107M) [application/x-debian-package]
Saving to: 'google-chrome-stable_current_amd64.deb.1'

google-chrome-stabl 100%[=====] 106,68M 15,9MB/s in 13s

2024-09-29 22:28:05 (8,51 MB/s) - 'google-chrome-stable_current_amd64.deb.1' saved [111860972/111860972]

dba@dba-vm:~$ sudo apt-get install -y ./google-chrome-stable_current_amd64.deb
[sudo] password for dba:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'google-chrome-stable' instead of './google-chrome-stable_current_amd64.deb'
google-chrome-stable is already the newest version (129.0.6668.58-1).
0 upgraded, 0 newly installed, 0 to remove and 249 not upgraded.
dba@dba-vm:~$ sudo apt-get -y install python3-pip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3-pip is already the newest version (22.0.2+dfsg-1ubuntu0.4).
0 upgraded, 0 newly installed, 0 to remove and 249 not upgraded.
dba@dba-vm:~$ pip3 install selenium
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: selenium in ./local/lib/python3.10/site-packages (4.25.0)
Requirement already satisfied: trio-websocket==0.9 in ./local/lib/python3.10/site-packages (from selenium) (0.11.1)
Requirement already satisfied: websocket-client==1.8 in ./local/lib/python3.10/site-packages (from selenium) (1.8.0)

dba@dba-vm:~$ pip3 install webdriver-manager
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: webdriver-manager in ./local/lib/python3.10/site-packages (4.0.2)
Requirement already satisfied: python-dotenv in ./local/lib/python3.10/site-packages (from webdriver-manager) (1.0.1)
Requirement already satisfied: packaging in ./local/lib/python3.10/site-packages (from webdriver-manager) (24.1)
Requirement already satisfied: requests in /usr/lib/python3/dist-packages (from webdriver-manager) (2.25.1)
dba@dba-vm:~$ pwd
/home/dba
dba@dba-vm:~$ ls
Desktop          Music            test.py
Documents        Pictures         thinclient_drives
Downloads        Public           Videos
google-chrome-stable_current_amd64.deb  snap
google-chrome-stable_current_amd64.deb.1 Templates
```

2) Шаг 2. Создать тестовый файл для проверки работоспособности Selenium и запустить

```
```test.py
```

```
from selenium import webdriver
```

```
from selenium.webdriver.chrome.options import Options
```

```
from selenium.webdriver.chrome.service import Service
```

```
from webdriver_manager.chrome import ChromeDriverManager options = Options()
```

```
options.add_argument('--headless')
```

```
options.add_argument('--no-sandbox')
```

```
options.add_argument('--disable-dev-shm-usage')
```

```
driver = webdriver.Chrome(service=Service(ChromeDriverManager().install()), opt>
```

```
driver.get("https://python.org")
```

```
print(driver.title)
```

```
driver.close()
```

```
dba@dba-vm:~$ python3 test.py
Welcome to Python.org
```

3) Шаг 3. Определим путь драйвера webdriver.Chrome.

```
``bash
```

```
find /home/dba -name "chromedriver"
```

В поиске находим путь для виртуальной машины dba :

```
/home/dba/.wdm/drivers/chromedriver/linux64/129.0.6668.58/chromedriver
linux64/chromedriver
```

4) Шаг 4. Создать скрипт sel.py для парсинга веб-сайта и выполнить обновленный код

```
sel.py
1 from selenium import webdriver
2 from selenium.webdriver.chrome.service import Service
3 from selenium.webdriver.common.by import By
4 import pandas as pd
5 import time
6 # Укажите путь к chromedriver
7 chrome_driver_path = "/home/dba/.wdm/drivers/chromedriver/linux64/129.0.6668.58/chromedriver-linux64/chromedriver"
8 # Шаг 1: Настройка драйвера Selenium
9 service = Service(chrome_driver_path)
10 driver = webdriver.Chrome(service=service)
11 # Шаг 2: Открытие страницы
12 url = "https://www.insurancejournal.com/top-100-insurance-agencies/"
13 driver.get(url)
14 # Шаг 3: Ждем несколько секунд для загрузки страницы
15 time.sleep(5)
16
17 # Шаг 4: Находим все элементы списка агентств
18 ranks = []
19 agency_names = []
20 pc_revenues = []
21 other_revenues = []
22 offices = []
23
24 agency_list = driver.find_elements(By.CLASS_NAME, 'rankings-agency-list-item')
25
26 # Шаг 5: В цикле извлекает Ранг, Название, P/C Revenue, Other Revenue и Офис
27 for agency in agency_list:
28 rank = agency.find_element(By.CLASS_NAME, 'agency-rank').text.strip()
29 ranks.append(rank)
30
31 name = agency.find_element(By.CLASS_NAME, 'agency-name').text.strip()
32 agency_names.append(name)
33
34 pc_revenue = agency.find_element(By.CLASS_NAME, 'agency-revenue').text.strip().replace('P/C REVENUE\n', '').strip()
35 pc_revenues.append(pc_revenue)
36
37 # Извлечение Other Revenue (если отсутствует, добавляем None)
38 try:
39 other_revenue = agency.find_element(By.CLASS_NAME, 'agency-other-revenue').text.strip().replace('OTHER REVENUE\n',
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```
from selenium import webdriver
from selenium.webdriver.chrome.service import Service
from selenium.webdriver.common.by import By
import pandas as pd
import time
Укажите путь к chromedriver
chrome_driver_path =
"/home/dba/.wdm/drivers/chromedriver/linux64/129.0.6668.58/chromedriver-
linux64/chromedriver"
Шаг 1: Настройка драйвера Selenium
service = Service(chrome_driver_path)
driver = webdriver.Chrome(service=service)
Шаг 2: Открытие страницы
url = "https://www.insurancejournal.com/top-100-insurance-agencies/"
driver.get(url)
Шаг 3: Ждем несколько секунд для загрузки страницы
time.sleep(5)

Шаг 4: Находим все элементы списка агентств
ranks = []
agency_names = []
pc_revenues = []
other_revenues = []
offices = []

agency_list = driver.find_elements(By.CLASS_NAME, 'rankings-agency-list-item')

Шаг 5: В цикле извлекает Ранг, Название, P\C Revenue, Other Revenue и Офис
for agency in agency_list:
 rank = agency.find_element(By.CLASS_NAME, 'agency-rank').text.strip()
 ranks.append(rank)

 name = agency.find_element(By.CLASS_NAME, 'agency-name').text.strip()
 agency_names.append(name)

 pc_revenue = agency.find_element(By.CLASS_NAME, 'agency-
revenue').text.strip().replace('P\C REVENUE\n', '').strip()
 pc_revenues.append(pc_revenue)

 # Извлечение Other Revenue (если отсутствует, добавляем None)
 try:
 other_revenue = agency.find_element(By.CLASS_NAME, 'agency-other-
revenue').text.strip().replace('OTHER REVENUE\n', '').strip()
 except:
 other_revenue = None
```

```
other_revenues.append(other_revenue)

office = agency.find_element(By.CLASS_NAME, 'agency-
office').text.strip().replace('OFFICE', '').strip()
offices.append(office)
Шаг 6. Создание DataFrame
data = {
 'Rank': ranks,
 'Agency Name': agency_names,
 'P/C Revenue': pc_revenues,
 'Other Revenue': other_revenues,
 'Office': offices
}
df = pd.DataFrame(data)

print(df.head())
Шаг 7. Закрытие драйвера
driver.quit()
```

---