ТЕХНОАТОМ

Автоматизация тестирования на python

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Selenium WebDriver

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Управление браузерами в Python

Что такое Selenium WebDriver?

Selenium WebDriver – это набор программных библиотек для управления браузерами.

Архитектура Selenium WebDriver

First code

```
from selenium import webdriver


driver = webdriver.Chrome()
driver.get("http://www.google.com")
assert "Google" in driver.title
assert "Yandex" not in driver.page_source

driver.close()
```

Локаторы

By CSS id

```
<html>
 <body>
  <form id="loginForm">
   <input name="username" type="text" />
   <input name="password" type="password" />
   <input name="continue" type="submit" value="Login" />
  </form>
 </body>
<html>
```

```
login_form = driver.find_element_by_id("loginForm")
login_forms = driver.find_elements_by_id("loginForm")
```

By CSS class name

```
<html>
 <body>
  <p class="content">Site p content goes here.</p>
  <a class="content">Site a content goes here.</a>
</body>
<html>
```

```
content = driver.find_element_by_class_name('content')
content = driver.find_elements_by_class_name('content')
```

By CSS selector

```
<html>
 <body>
  <p class="content">Site p content goes here.</p>
  <a class="content">Site a content goes here.</a>
</body>
<html>
```

```
content = driver.find_element_by_css_selector('p.content')
content = driver.find_elements_by_css_selector('p.content')
```

By name attribute

```
<html>
 <body>
  <form id="loginForm">
   <input name="username" type="text" />
   <input name="password" type="password" />
   <input name="continue" type="submit" value="Login" />
   <input name="continue" type="button" value="Clear" />
  </form>
</body>
<html>
```

```
username = driver.find_element_by_name('username')
password = driver.find_element_by_name('password')
```

By XPATH

```html
<html>
 <body>
  <form id="loginForm">
   <input name="username" type="text" />
   <input name="password" type="password" />
   <input name="continue" type="submit" value="Login" />
   <input name="continue" type="button" value="Clear" />
  </form>
</body>
<html>
```

```
login_form = driver.find_element_by_xpath("/html/body/form[1]")
login_form = driver.find_element_by_xpath("//form[1]")
login_form = driver.find_element_by_xpath("//form[@id='loginForm']")
```

Взаимодействие со страницей

Code example #1 | Form password

```
<input type="text" name="passwd" id="passwd-id">Input password here</input>


element = driver.find_element_by_id("passwd-id")
element = driver.find_element_by_name("passwd")
element = driver.find_element_by_xpath("//input[@id='passwd-id']")
element = driver.find_element_by_xpath("//input[contains(text(), 'Input password')]")
```

```
>>> element
<selenium.webdriver.remote.webelement.WebElement>
        id: '4e4387a1-6987-4050-a296-a1f395ca6d81'
        location: {'x': 1042, 'y': 90}
        rect: {'height': 37, 'width': 224, 'x': 1041.859375, 'y': 89.90625}
        size: {'height': 37, 'width': 224}
        tag_name: 'input'
        text: 'text'

>>> dir(element)
is_displayed
send_keys
clear
click
```

Code example #2 | Form password

```
<input type="text" name="passwd" id="passwd-id" />
```

```
from selenium.webdriver.common.keys import Keys
```

```
element = driver.find_element_by_id("passwd-id")
element.clear()
element.send_keys("MyPassword")
element.send_keys(Keys.RETURN)
```

Pytest example

```
from selenium import webdriver
from selenium.webdriver.common.keys import Keys


def test():
    driver = webdriver.Chrome()
    driver.get("http://www.python.org")
    assert "Python" in driver.title

    elem = driver.find_element_by_name("q")
    elem.send_keys("pycon")
    elem.send_keys(Keys.RETURN)
    assert "No results found." not in driver.page_source

    driver.close()
```

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