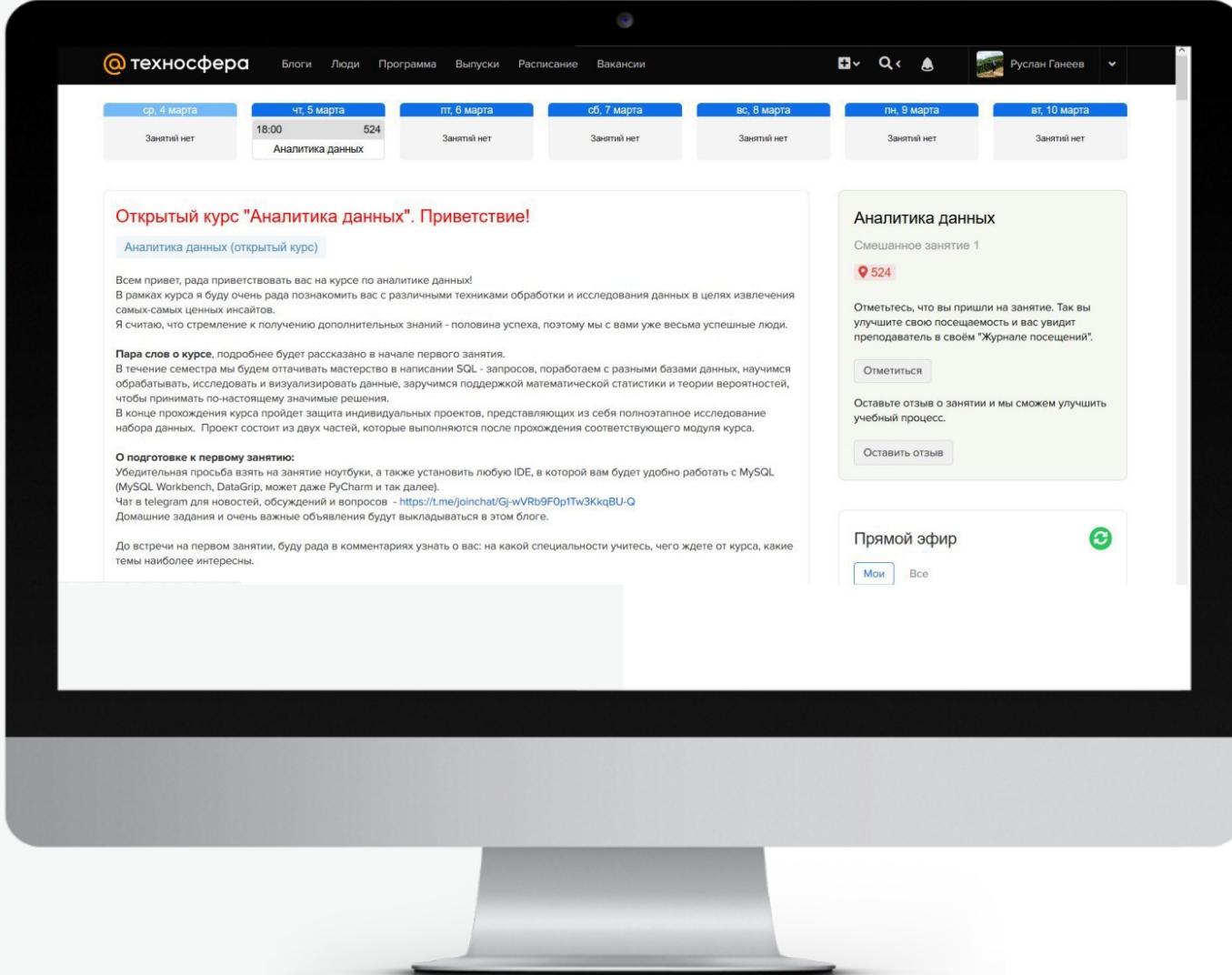


# Автоматизация тестирования на Python

Константин Ермаков





Не забудьте  
отметиться  
на портале

---

# Тестирование UI: Selenium

- 1.Selenium WebDriver
- 2.Локаторы, атрибуты
- 3.Взаимодействие со страницей
- 4.Chrome Options
- 5.Альтернативы

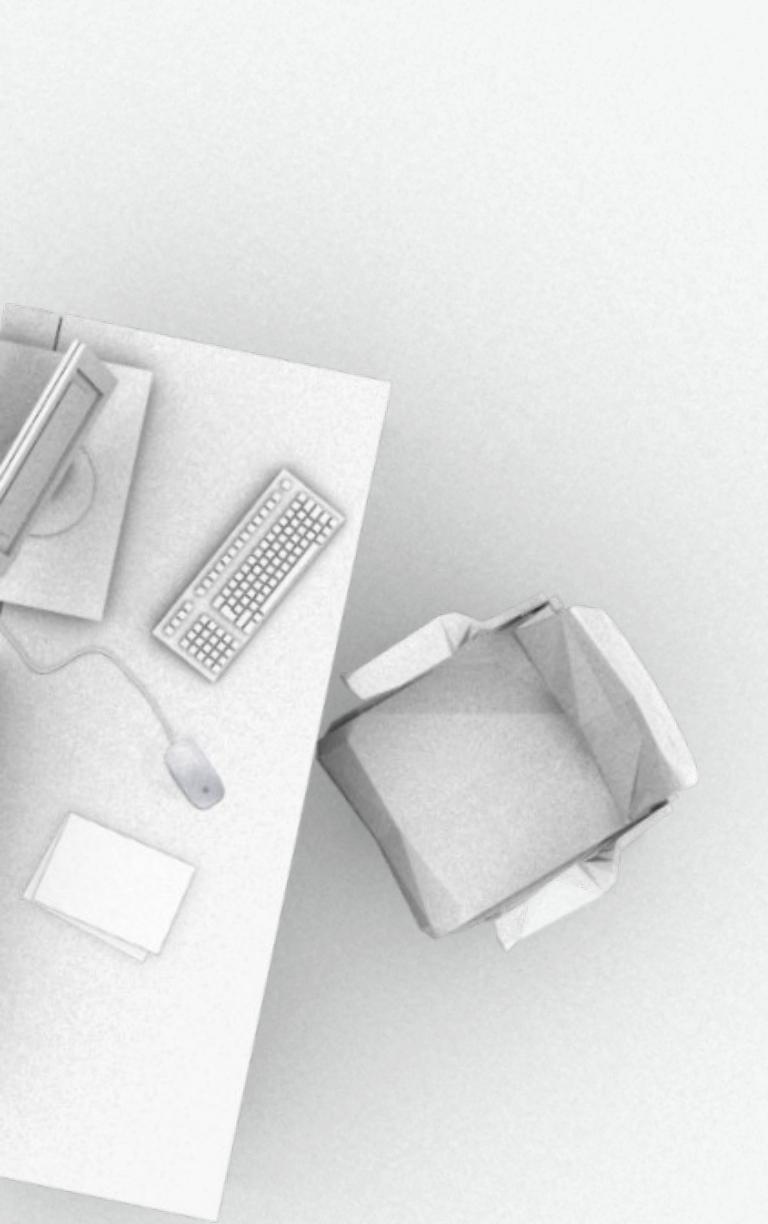


# Selenium

# Что такое Selenium?

Selenium – проект нескольких продуктов  
с открытым исходным кодом для работы с браузерами:

- Selenium WebDriver
- Selenium RC
- Selenium Server
- Selenium Grid
- Selenium IDE



# Selenium WebDriver

# Что такое Selenium WebDriver?

Selenium WebDriver – набор программных библиотек  
для управления браузерами



# Selenium WebDriver



# Selenium WebDriver

```
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()
```



# Selenium WebDriver: локаторы

# Selenium WebDriver: 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")
```

# Selenium WebDriver: локаторы

## By 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')
```

# Selenium WebDriver: локаторы

## 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('a.content')
```

# Selenium WebDriver: локаторы

## By name attribute

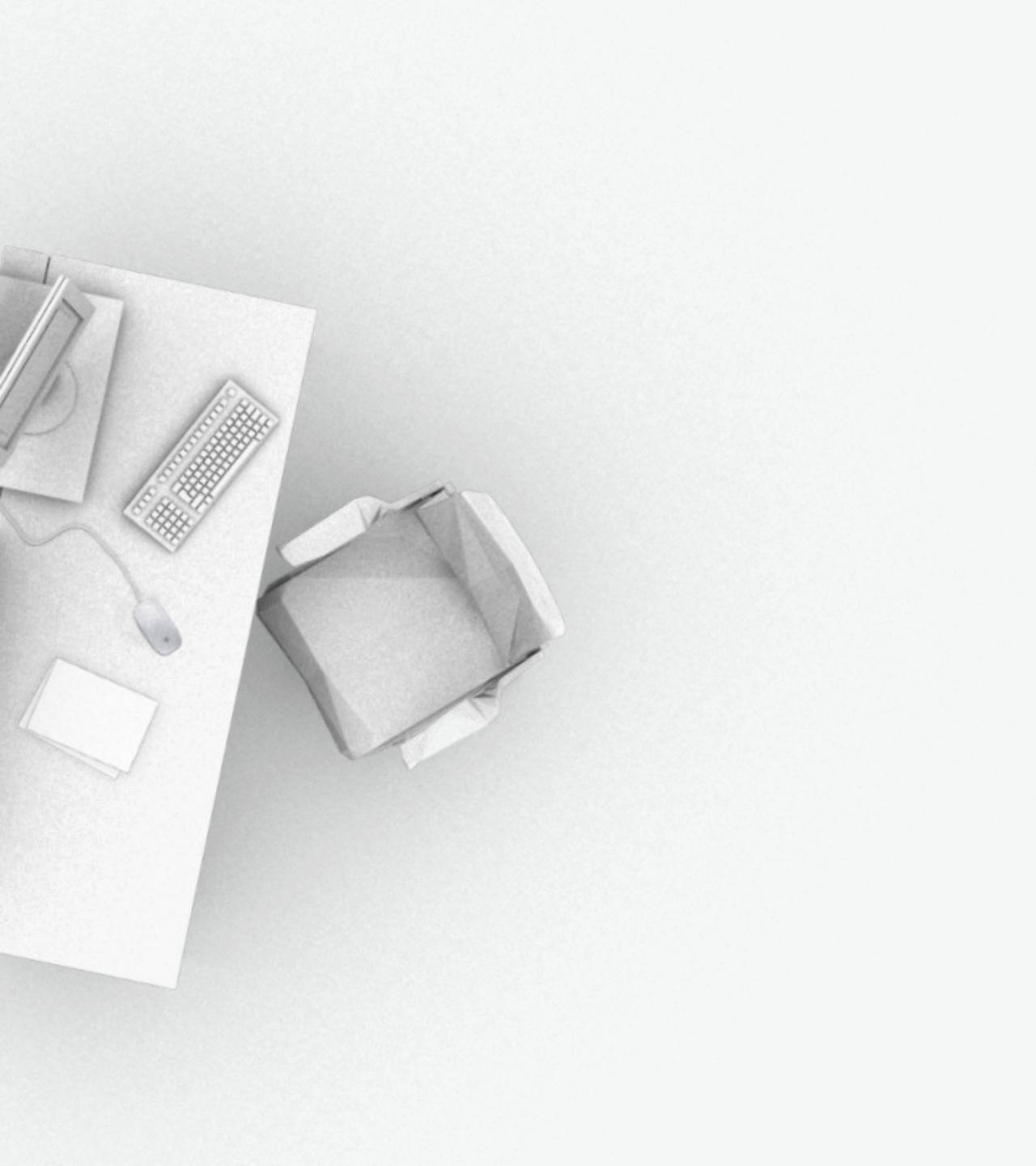
```
<html>
<body>
<form id="loginForm">
  <input name="username" type="text" />
  <input name="password" type="password" />
  <input name="continue" type="submit" value="Login" />
  <input name="continue" type="button" value="Clear" />
</form>
</body>
<html>
```

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

# Selenium WebDriver: локаторы By XPath

```
<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']")
```



# Selenium: взаимодействие со страницей

# Selenium WebDriver: взаимодействие со страницей

```
<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
```

# Selenium WebDriver: взаимодействие со страницей

```
<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)
```

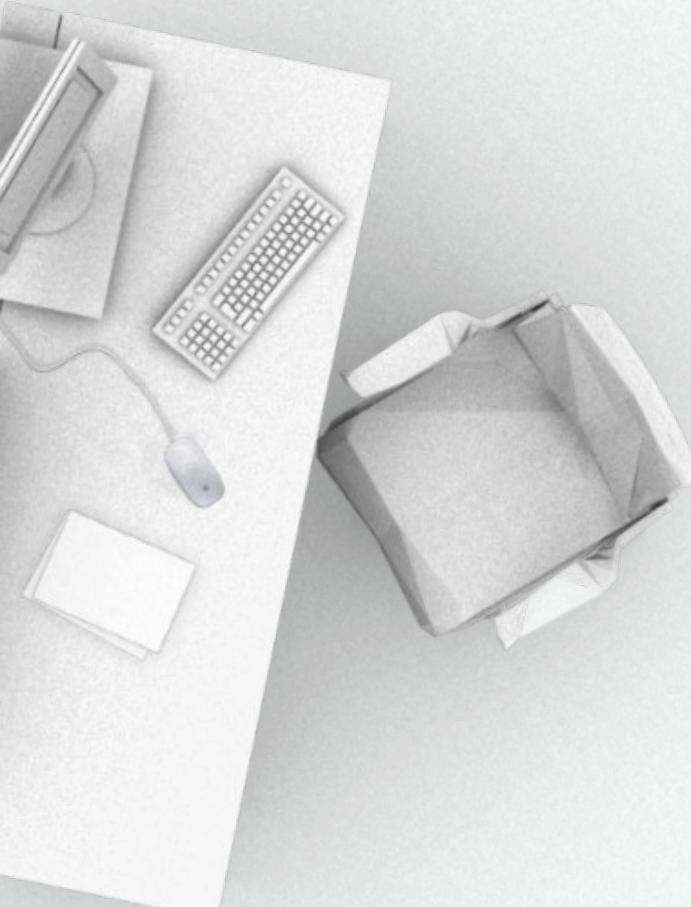
# Selenium WebDriver: pytest example

```
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

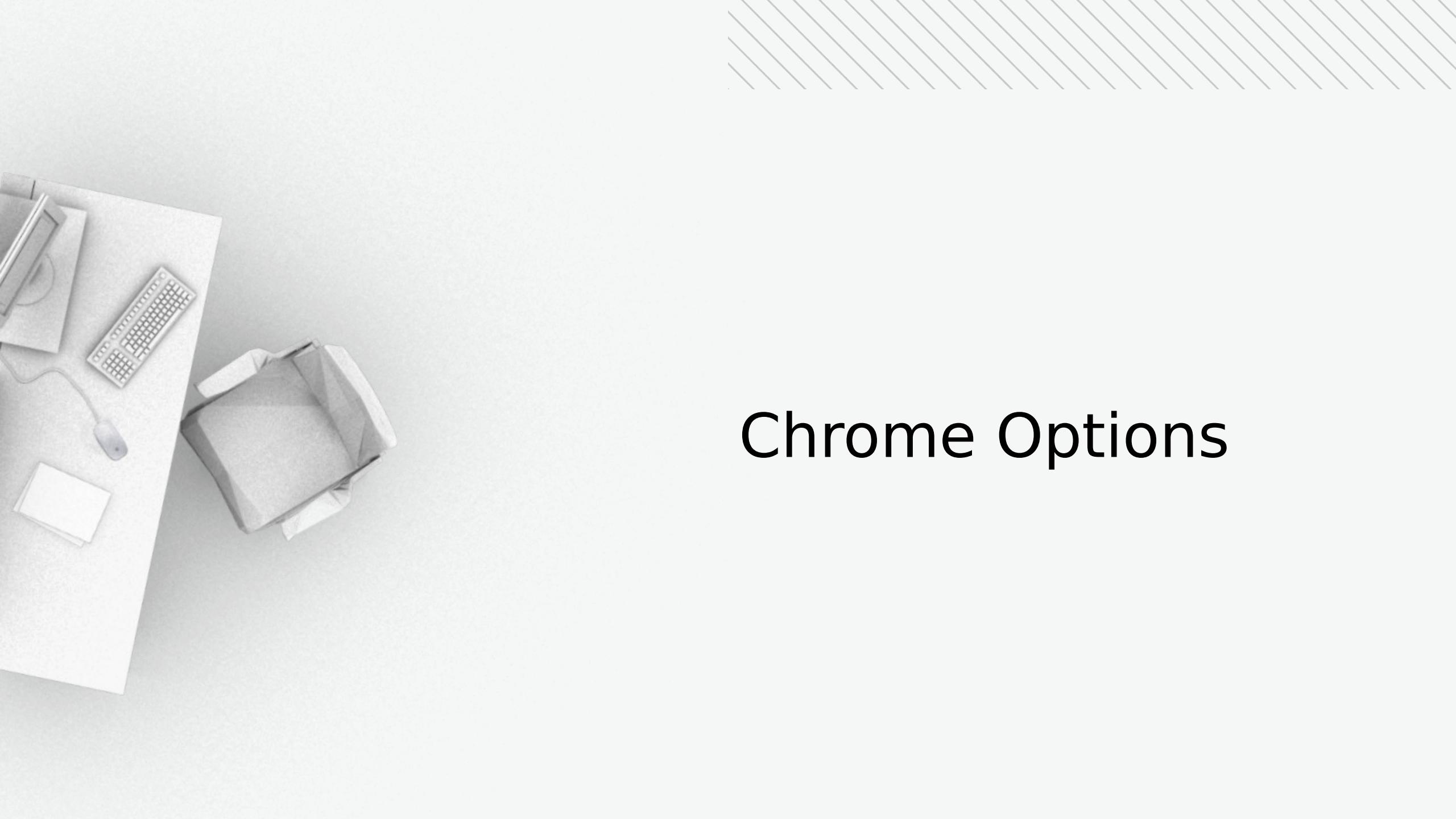
    driver.close()
```



# Атрибуты

# Атрибуты

```
element = driver.find_element_by_id("some_id")
element.get_attribute('display')
```

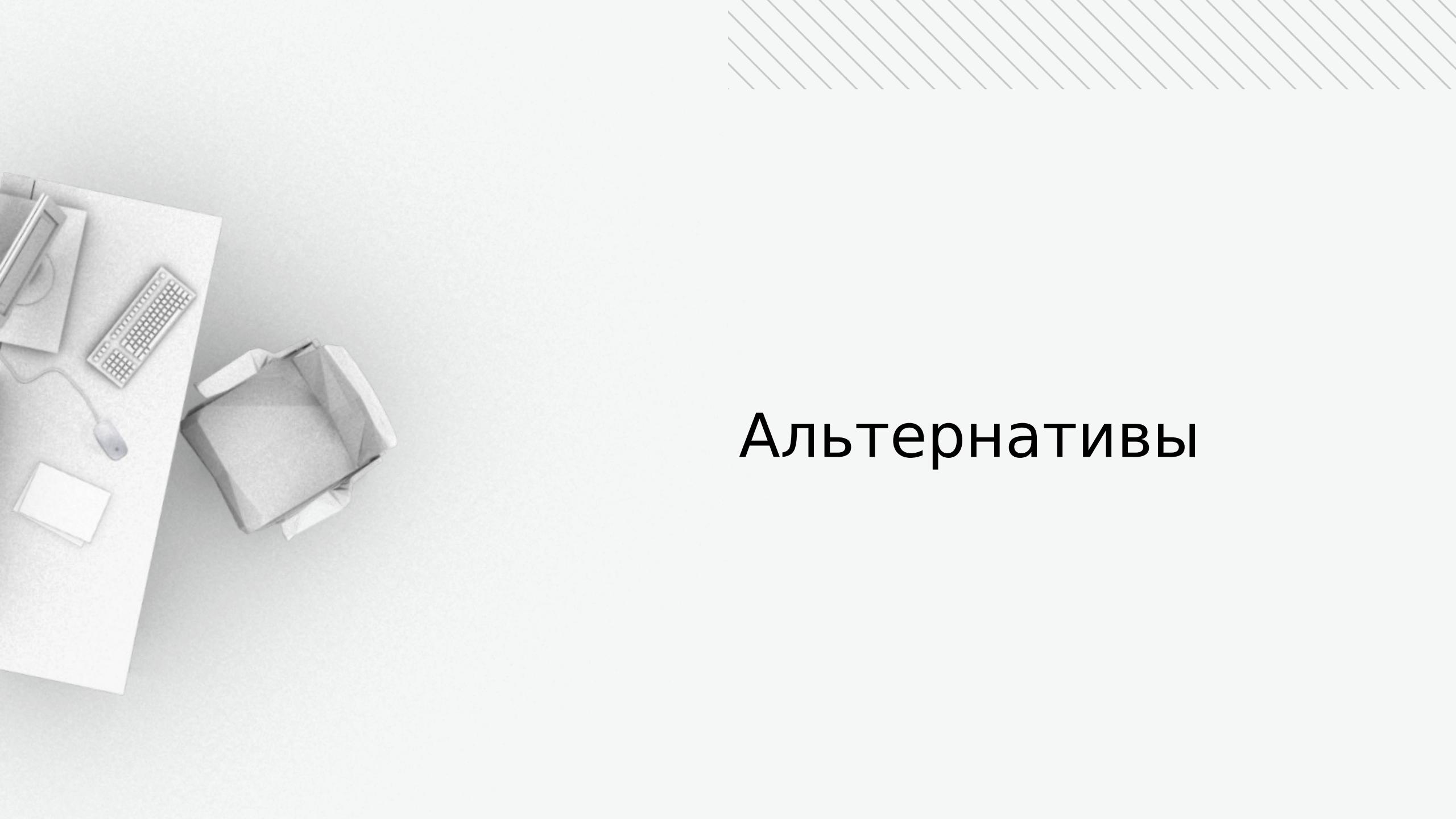
A grayscale illustration of a computer setup. It includes a monitor displaying a grid pattern, a keyboard, a mouse, and some papers on a desk. A large, crumpled piece of paper is prominently featured in the foreground.

# Chrome Options

---

# Chrome Options

```
options = webdriver.ChromeOptions()  
options.add_argument("--window-size=800,600")  
options.set_headless()
```

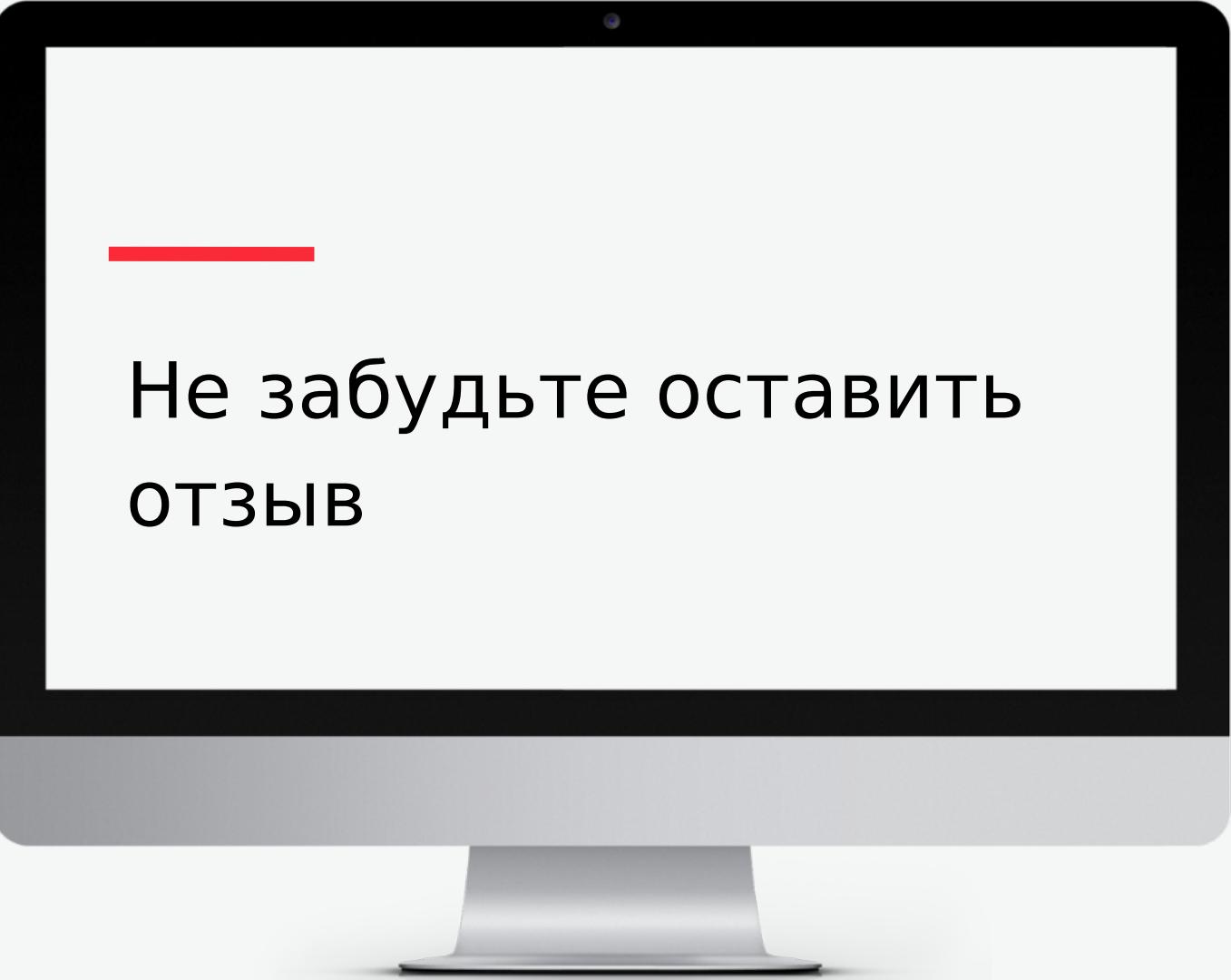


# Альтернативы

---

# Альтернативы

- TestCafe
- Cypress
- Playwright
- Watir
- Sahi



—

Не забудьте оставить  
отзыв



**СПАСИБО  
ЗА ВНИМАНИЕ**

