

Acceptance Test and Acceptance-Test Driven Development

with Robot Framework



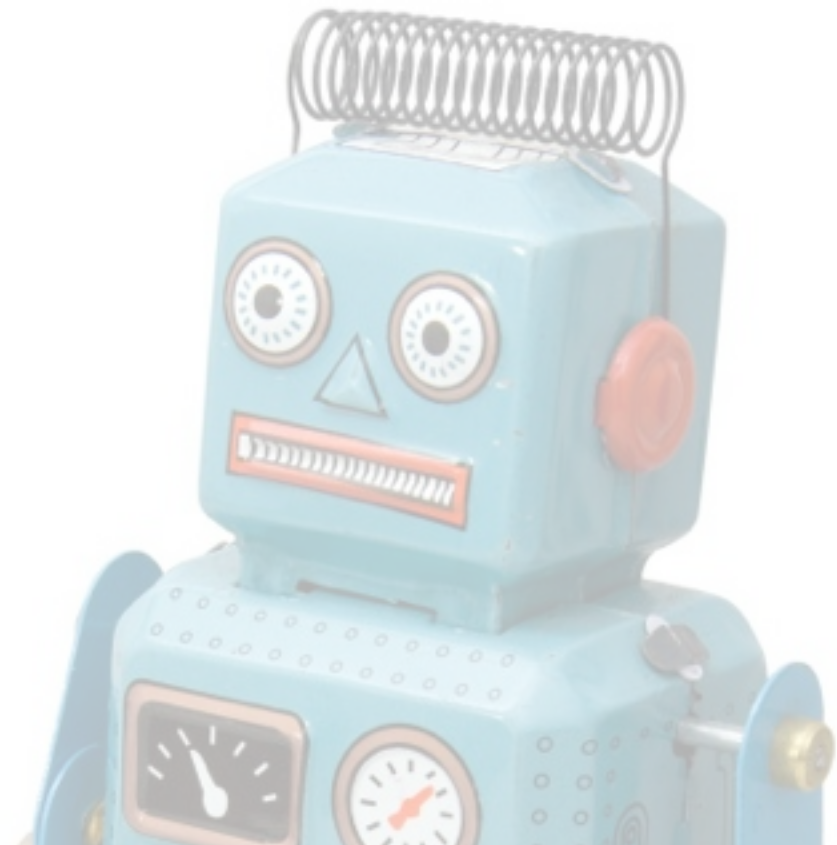
What is Robot ?

- Test automation framework
- Based on Python
- Keyword-Driven Development
- Extensible with plug-ins
- Open source
 - Sponsor by Nokia Siemens Networks



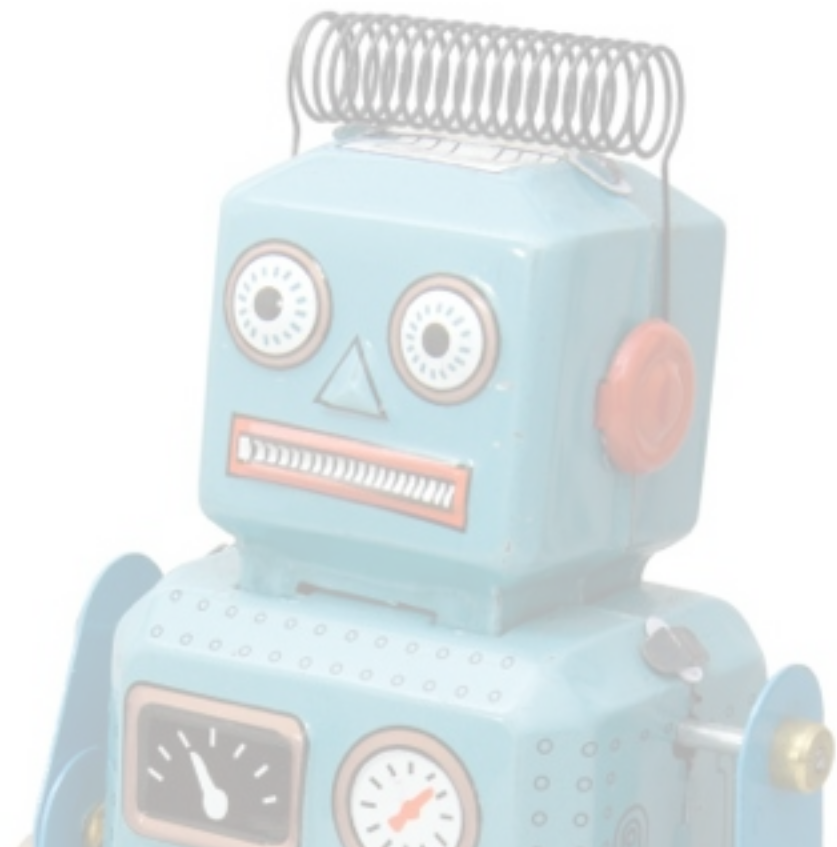
For ?

- End-to-End Testing
- Acceptance Testing
- Acceptance Test Driven Development (ATDD)



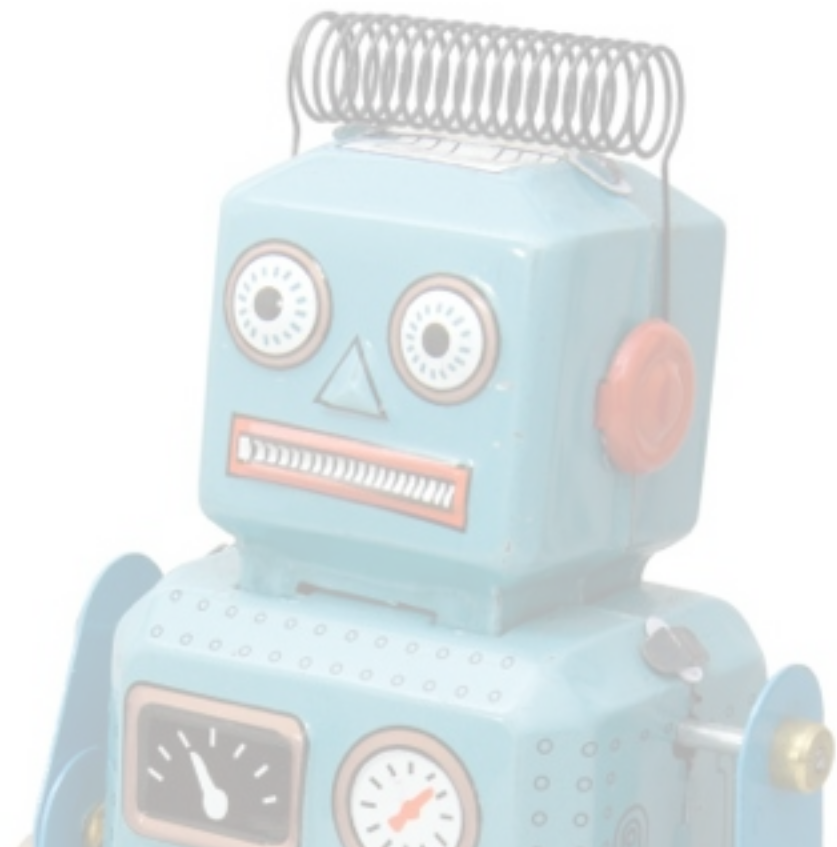
Application ?

- Windows-based application
- Java-based application
- Web application
- Distributed application
- Compatibility
-

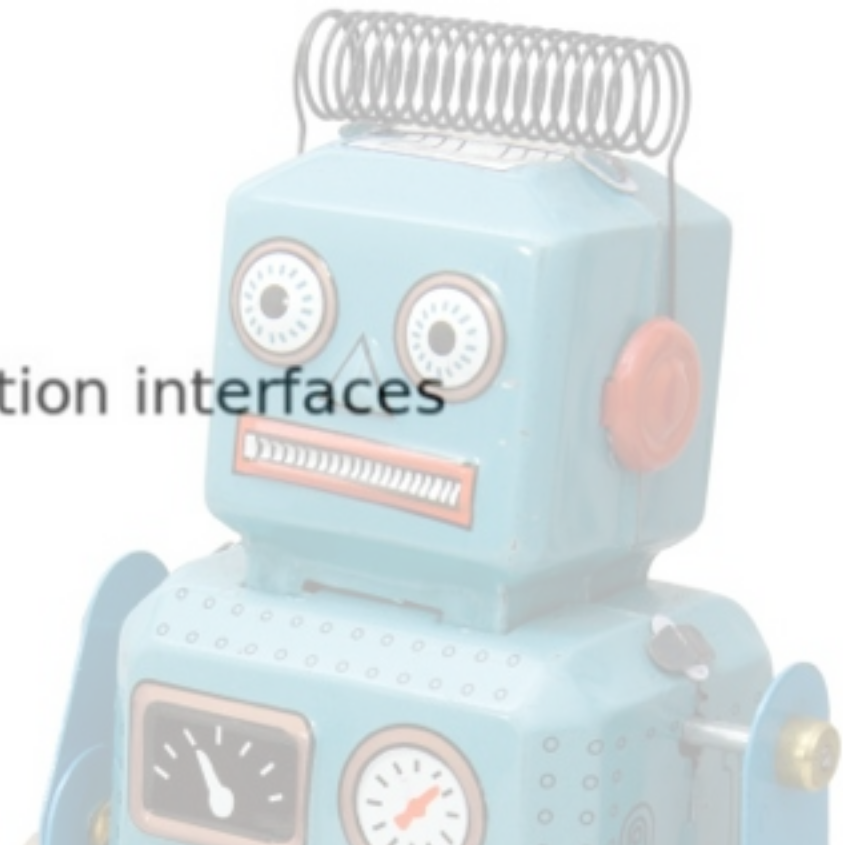
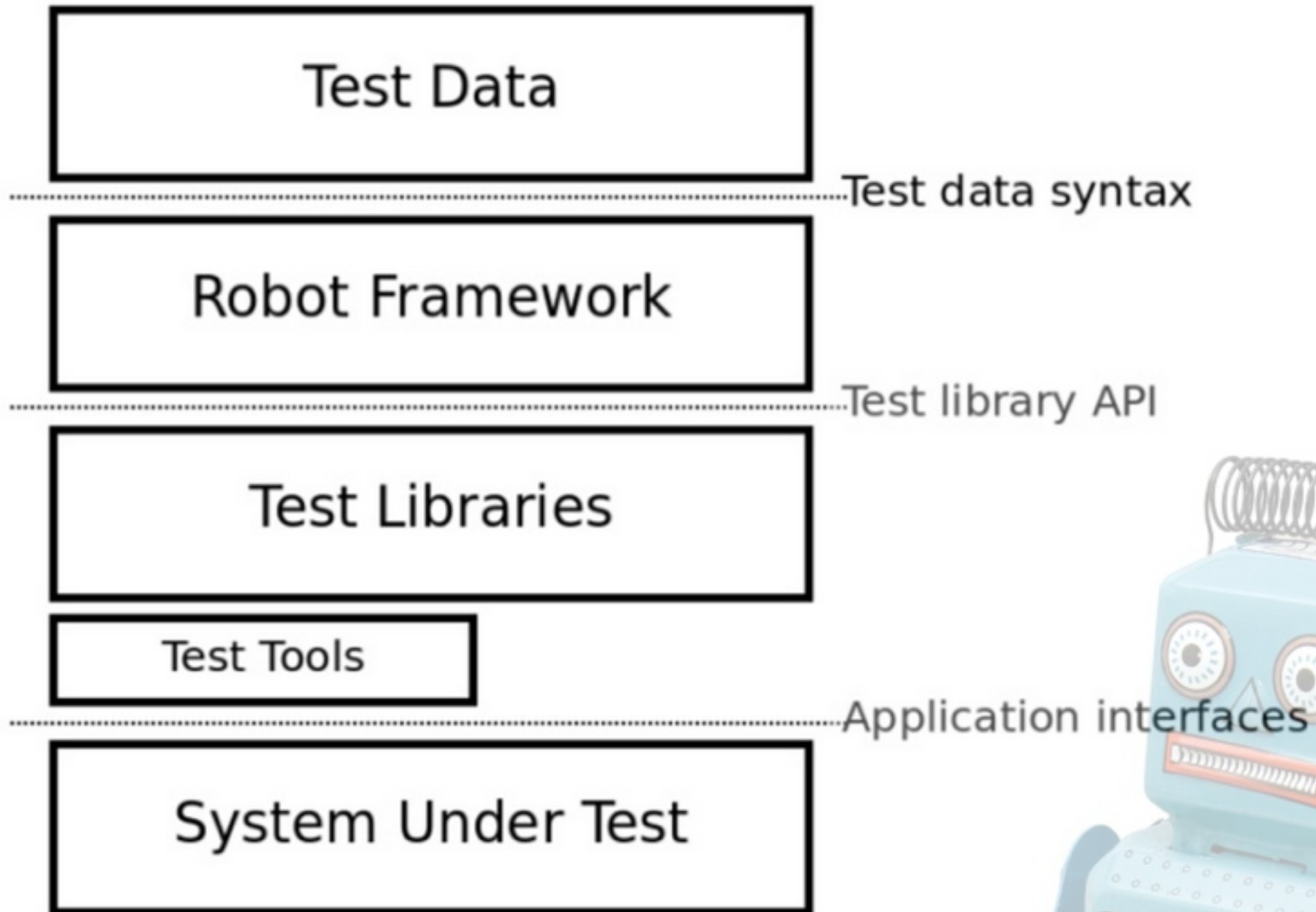


Why ?

- Working with high level keywords
- Easy to use
- Easy to understand
- Easy integration with CI tools
- Support Data driven testing
- Result report, logging
- Tagging

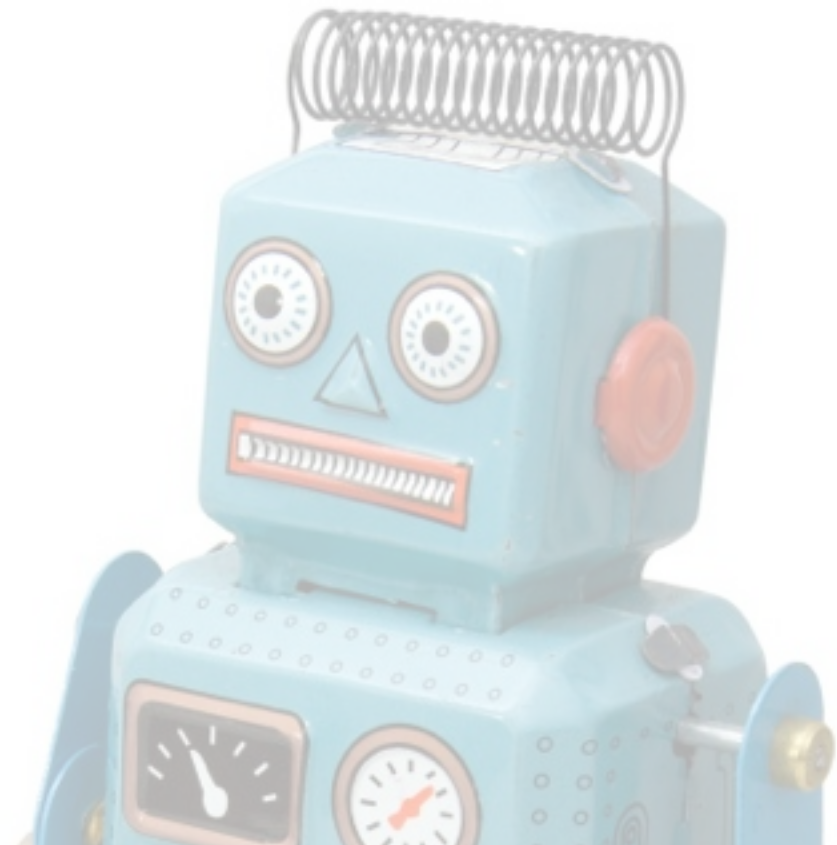


Architecture



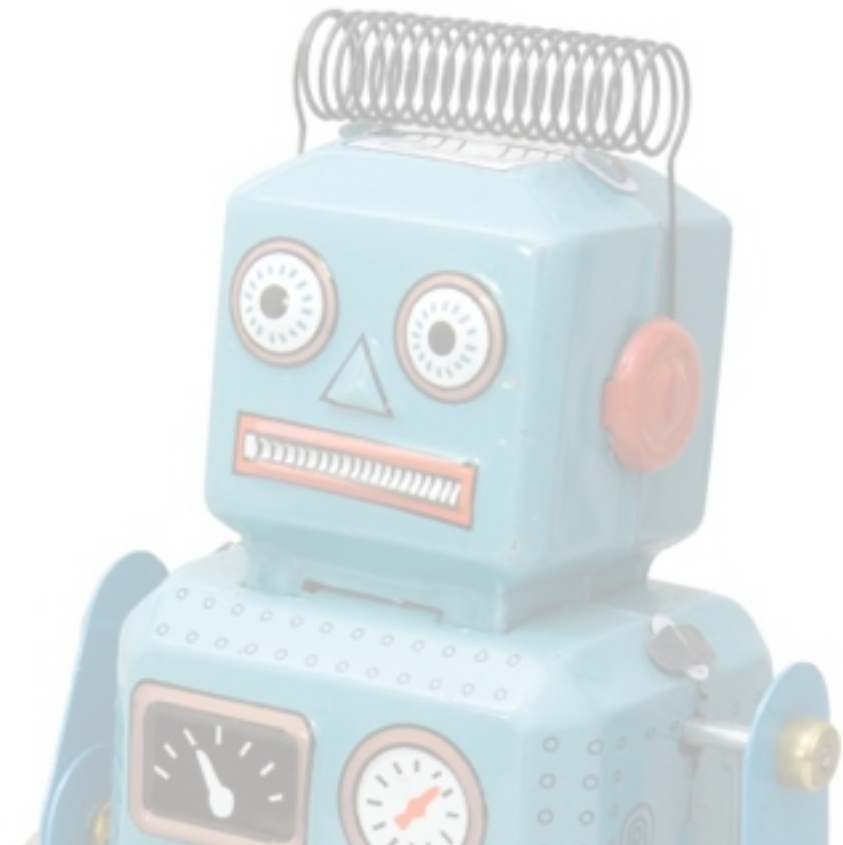
Test data format

- HTML
- TSV (Tab Separate Value)
- Plain text
- Pipe and space separate



Test Structure

```
test_000.txt  *  
1  *** Settings ***  
2  
3  
4  *** Variables ***  
5  
6  
7  *** Testcases ***  
8  
9  
10 *** Keyword ***
```



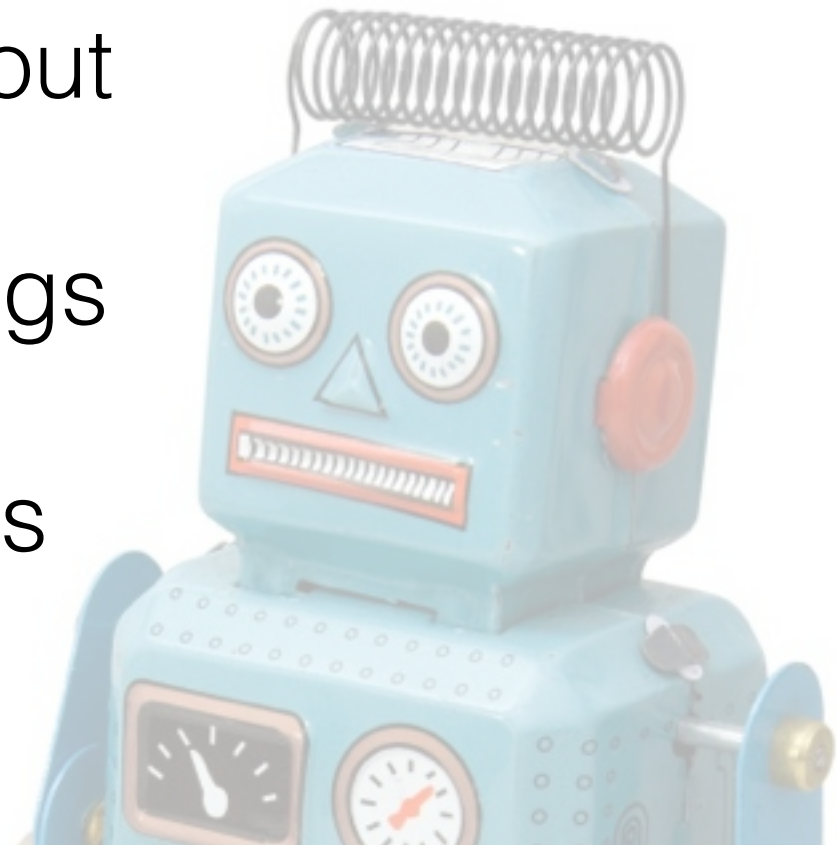
Settings

- **Alias Name** => Setting, Settings, Metadata
- Define metadata for test suites and test cases
- Import test libraries
- Resource files
- Define metadata for test suites and test cases



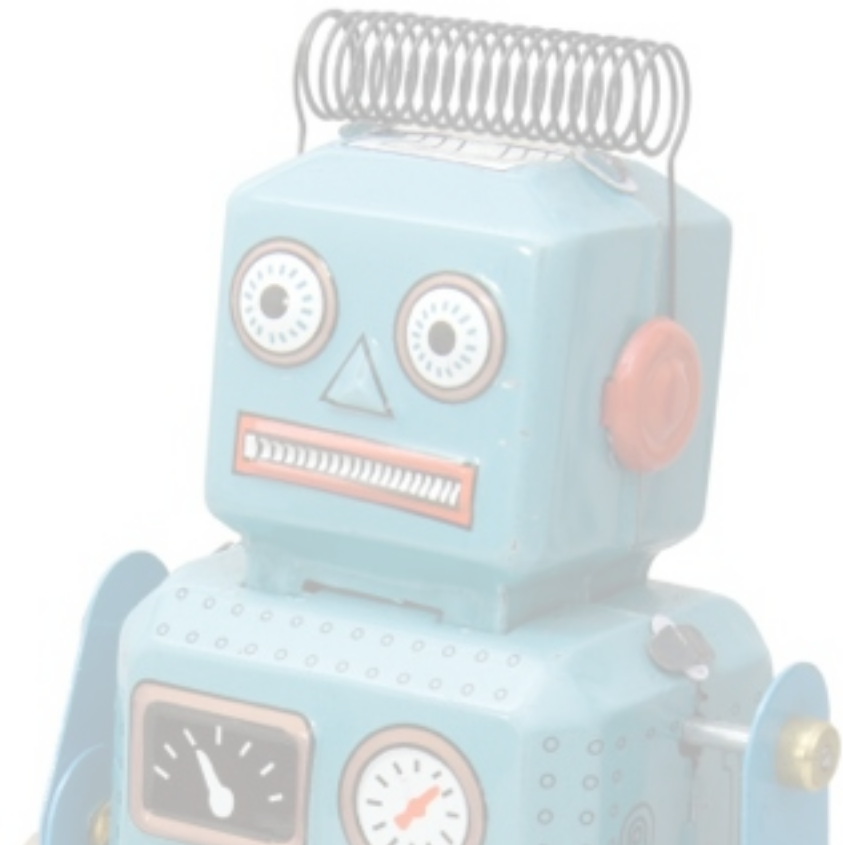
Settings

- Library
- Resource
- Documentation
- Suite Setup
- Suite Teardown
- Test Setup
- Test Teardown
- Test Template
- Test Timeout
- Default Tags
- Force Tags



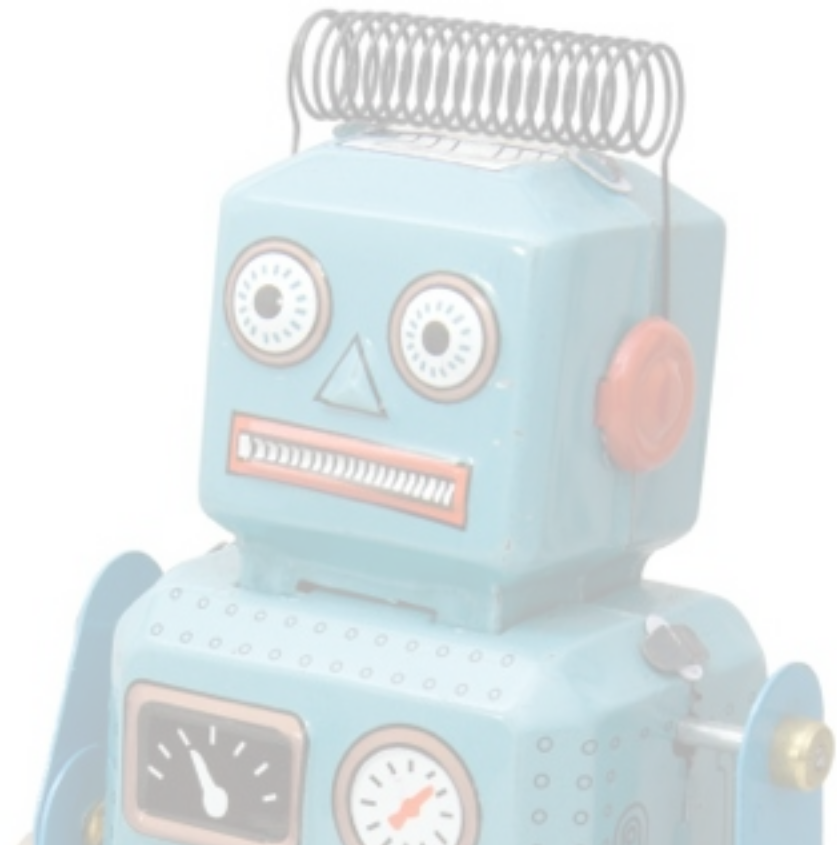
Variables

- **Alias Name** => Variable, Variables



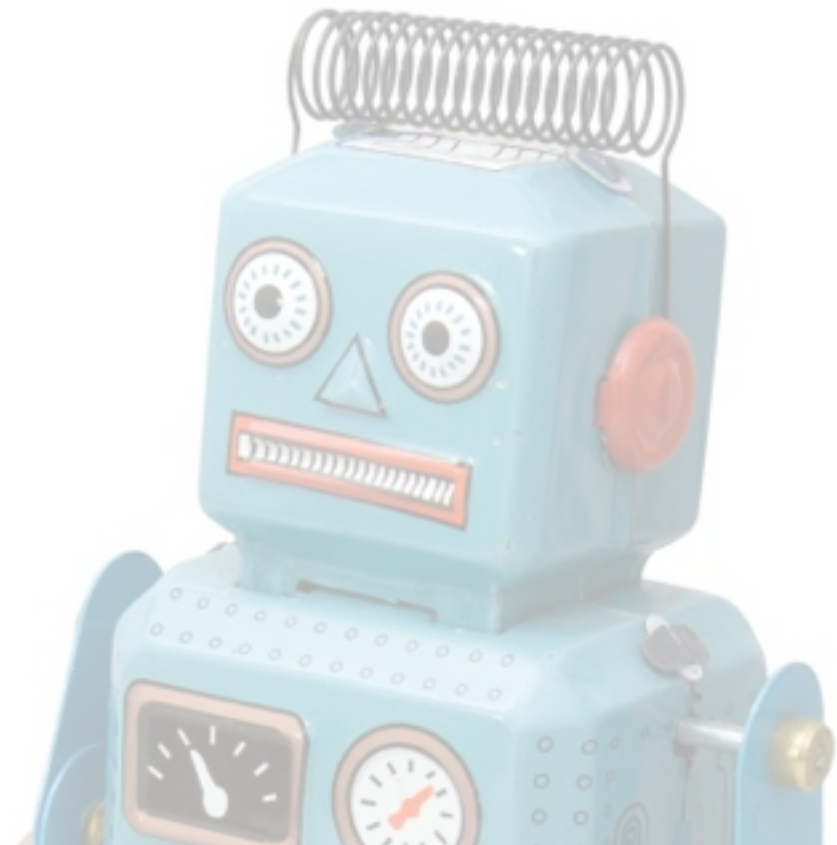
Test case

- **Alias Name** => Testcases, Test Case, Test Cases
- Create test cases from keywords



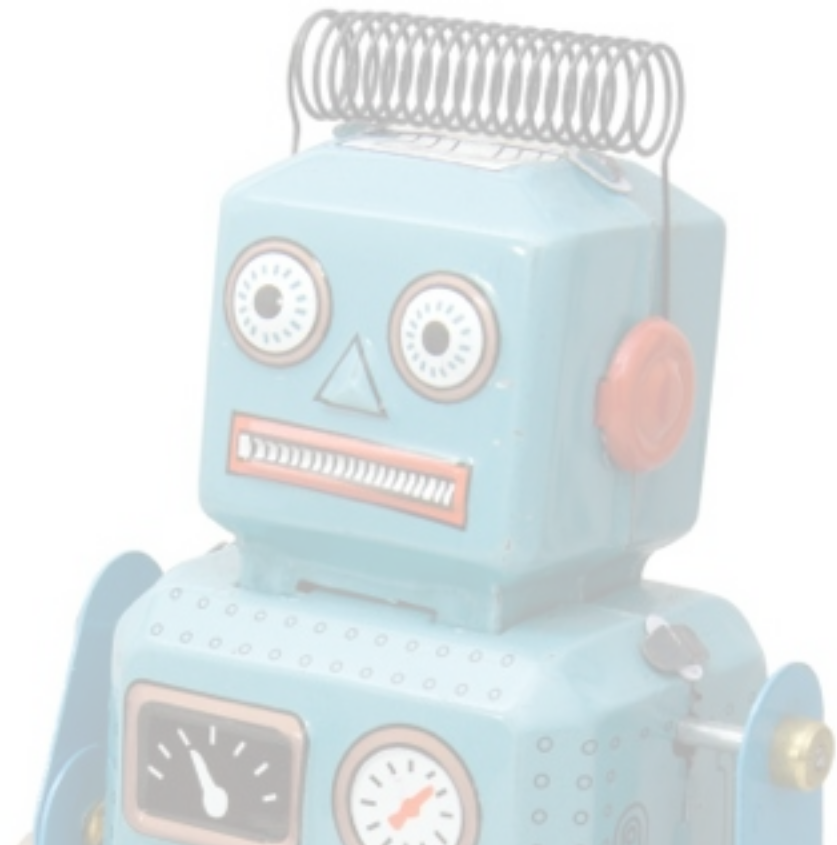
Test case

- [Documentation]
- [Tags]
- [Setup]
- [Teardown]
- [Template]
- [Timeout]



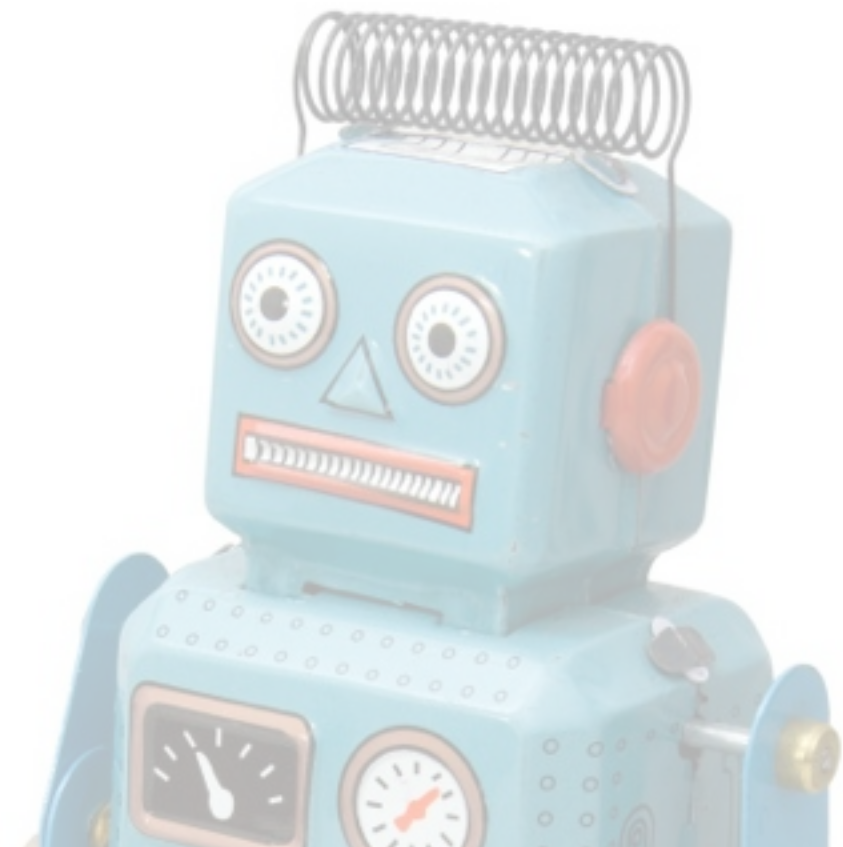
Keyword

- **Alias Name** => Keyword, Keywords, User Keyword, User Keywords
- Create user keywords from existing low-level keyword



Keyword

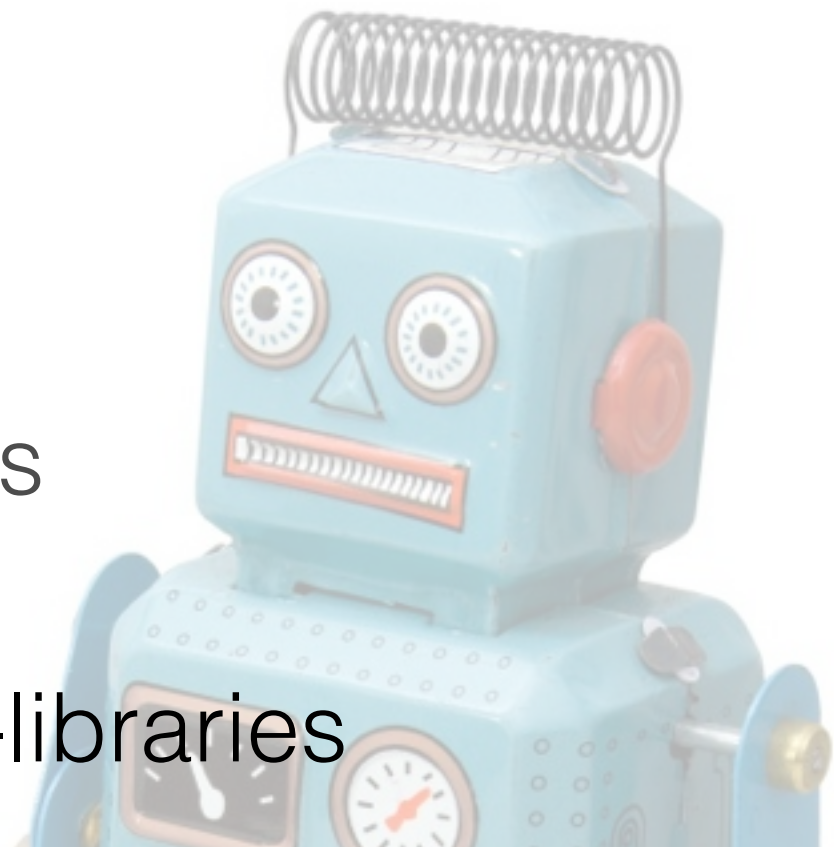
- [Documentation]
- [Arguments]
- [Return]
- [Timeout]



Standard Libraries

- **Build in**
- **Operating System**
- Screenshot
- Telnet
- String
- **Collections**
- Remote
- Dialog
- XML
- Process

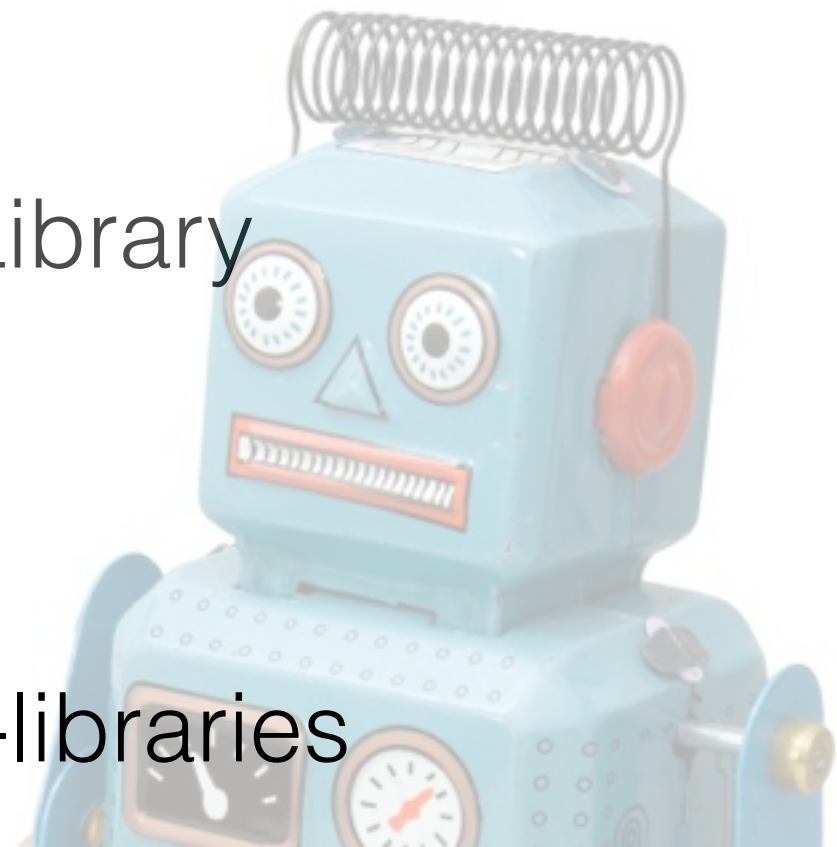
<http://robotframework.org/#test-libraries>



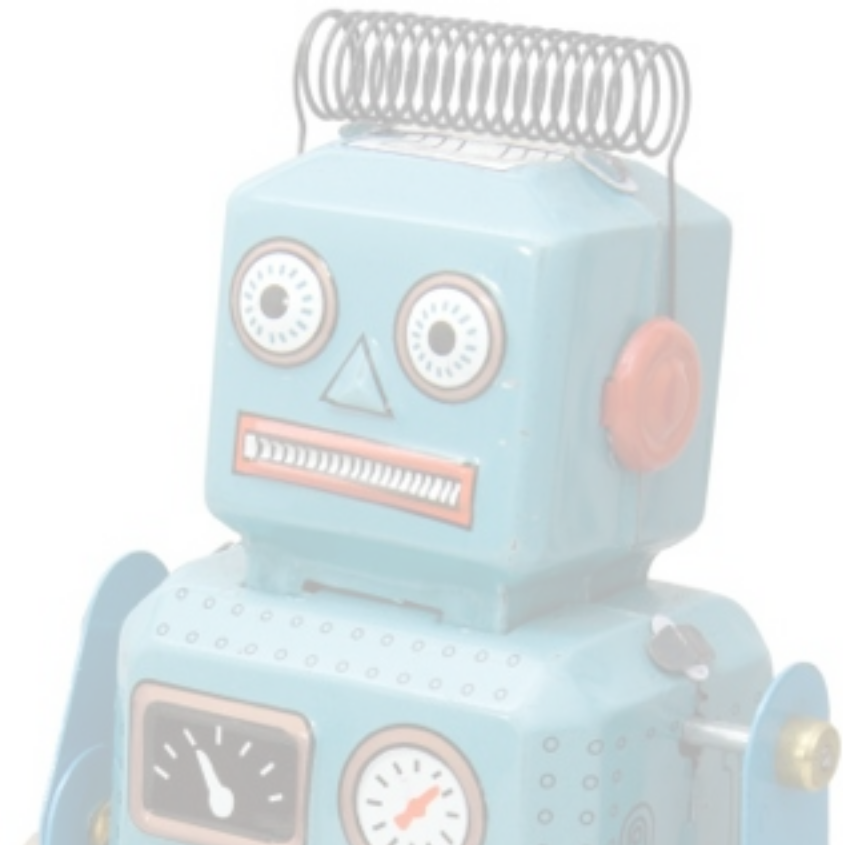
External Libraries

- **Selenium2Library**
- Android
- iOS
- Database
- FTP
- HTTP
- MongoDB
- SSH
- AutoltLibrary
- Swing

<http://robotframework.org/#test-libraries>

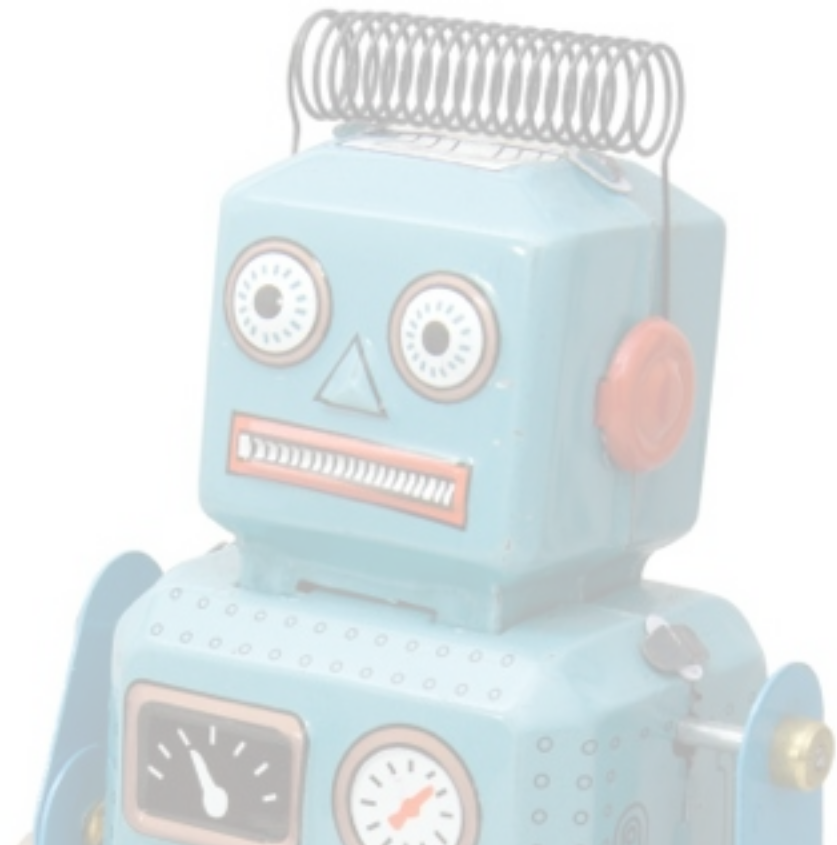


Selenium2Library



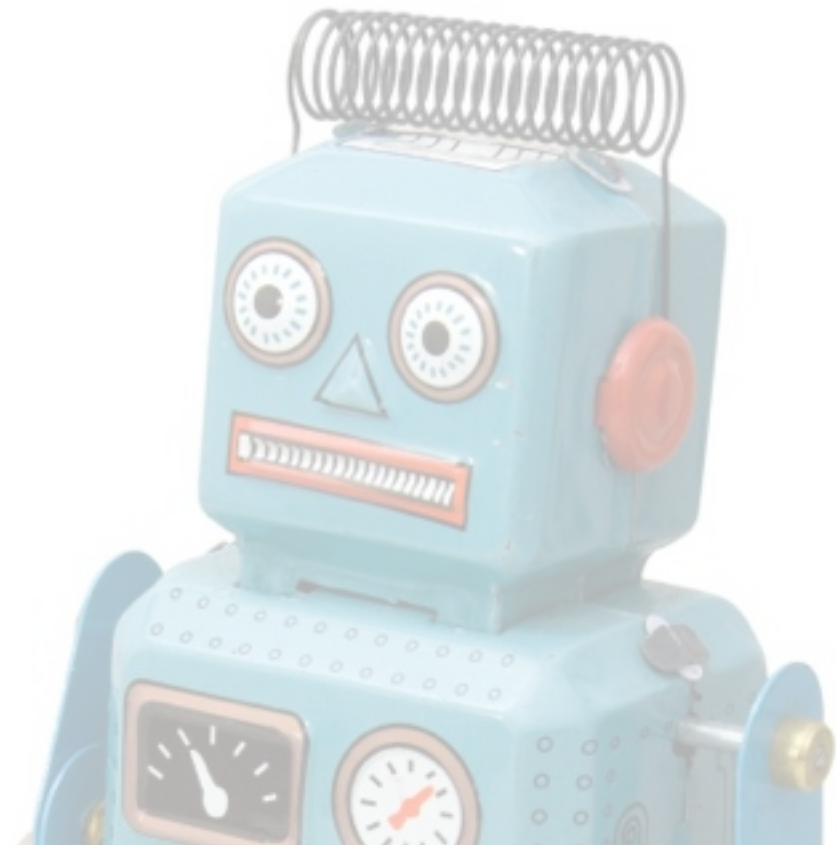
Selenium Keyword

- Open Browser <url> <browser>
- Input Text <locator> <value>
- Click Button <locator>
- Click Link <locator>
- Close Browser



Selenium Keyword

- Wait Until Page Contains <text>
- Page Should Contain <text>
- Title Should Be <text>



More

Add Cookie · Alert Should Be Present · Assign Id To Element · Capture Page Screenshot · Checkbox Should Be Selected ·
Checkbox Should Not Be Selected · Choose Cancel On Next Confirmation · Choose File · Choose Ok On Next Confirmation · Click Button ·
Click Element · Click Element At Coordinates · Click Image · Click Link · Close All Browsers · Close Browser · Close Window · Confirm Action ·
Create Webdriver · Current Frame Contains · Current Frame Should Not Contain · Delete All Cookies · Delete Cookie · Double Click Element ·
Drag And Drop · Drag And Drop By Offset · Element Should Be Disabled · Element Should Be Enabled · Element Should Be Visible ·
Element Should Contain · Element Should Not Be Visible · Element Text Should Be · Execute Async Javascript · Execute Javascript · Focus ·
Frame Should Contain · Get Alert Message · Get All Links · Get Cookie Value · Get Cookies · Get Element Attribute · Get Horizontal Position ·
Get List Items · Get Location · Get Matching Xpath Count · Get Selected List Label · Get Selected List Labels · Get Selected List Value ·
Get Selected List Values · Get Selenium Implicit Wait · Get Selenium Speed · Get Selenium Timeout · Get Source · Get Table Cell · Get Text ·
Get Title · Get Value · Get Vertical Position · Get Window Identifiers · Get Window Names · Get Window Size · Get Window Titles · Go Back ·
Go To · Input Password · Input Text · List Selection Should Be · List Should Have No Selections · Location Should Be ·
Location Should Contain · Log Location · Log Source · Log Title · Maximize Browser Window · Mouse Down · Mouse Down On Image ·
Mouse Down On Link · Mouse Out · Mouse Over · Mouse Up · Open Browser · Open Context Menu · Page Should Contain ·
Page Should Contain Button · Page Should Contain Checkbox · Page Should Contain Element · Page Should Contain Image ·
Page Should Contain Link · Page Should Contain List · Page Should Contain Radio Button · Page Should Contain Textfield ·
Page Should Not Contain · Page Should Not Contain Button · Page Should Not Contain Checkbox · Page Should Not Contain Element ·
Page Should Not Contain Image · Page Should Not Contain Link · Page Should Not Contain List · Page Should Not Contain Radio Button ·
Page Should Not Contain Textfield · Press Key · Radio Button Should Be Set To · Radio Button Should Not Be Selected ·
Register Keyword To Run On Failure · Reload Page · Select All From List · Select Checkbox · Select Frame · Select From List ·
Select From List By Index · Select From List By Label · Select From List By Value · Select Radio Button · Select Window ·
Set Browser Implicit Wait · Set Selenium Implicit Wait · Set Selenium Speed · Set Selenium Timeout · Set Window Size · Simulate ·
Submit Form · Switch Browser · Table Cell Should Contain · Table Column Should Contain · Table Footer Should Contain ·
Table Header Should Contain · Table Row Should Contain · Table Should Contain · Textarea Should Contain · Textarea Value Should Be ·
Textfield Should Contain · Textfield Value Should Be · Title Should Be · Unselect Checkbox · Unselect Frame · Unselect From List ·
Unselect From List By Index · Unselect From List By Label · Unselect From List By Value · Wait For Condition · Wait Until Element Is Visible ·
Wait Until Page Contains · Wait Until Page Contains Element · Xpath Should Match X Times

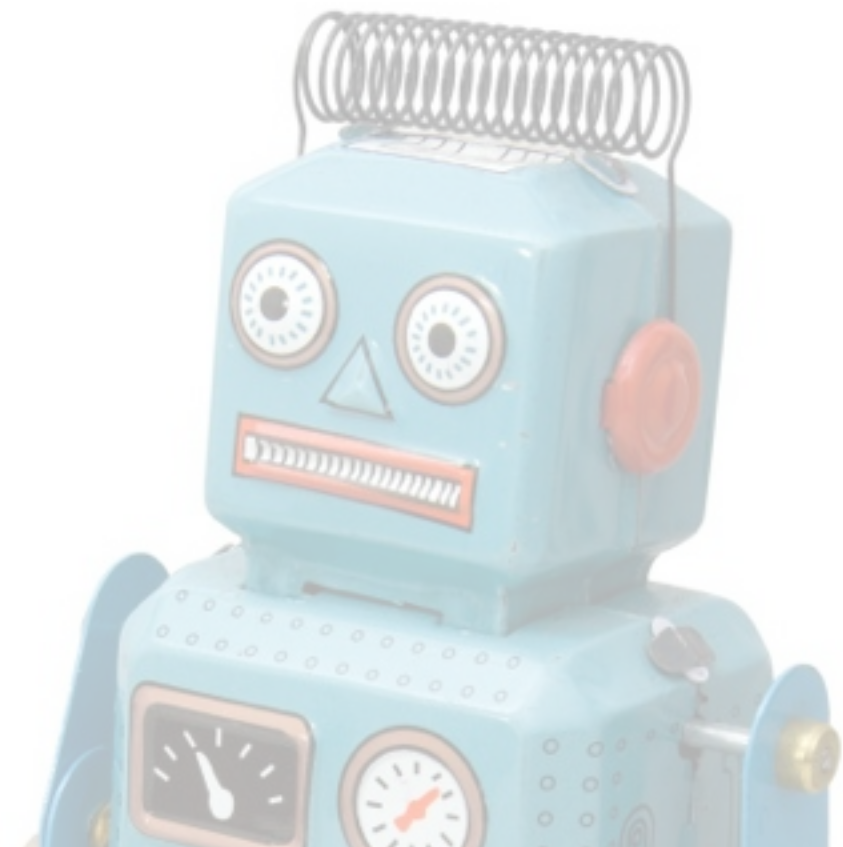
<http://rtomac.github.io/robotframework-selenium2library/doc/Selenium2Library.html>

Hello Robot

- Create file **hello.txt**

```
hello.txt  x
1  *** Settings ***
2  Library      Selenium2Library
3
4
5  *** Testcases ***
6  Hello World
7  Open Browser      http://www.google.com
```

- Run with
 - **\$pybot hello.txt**

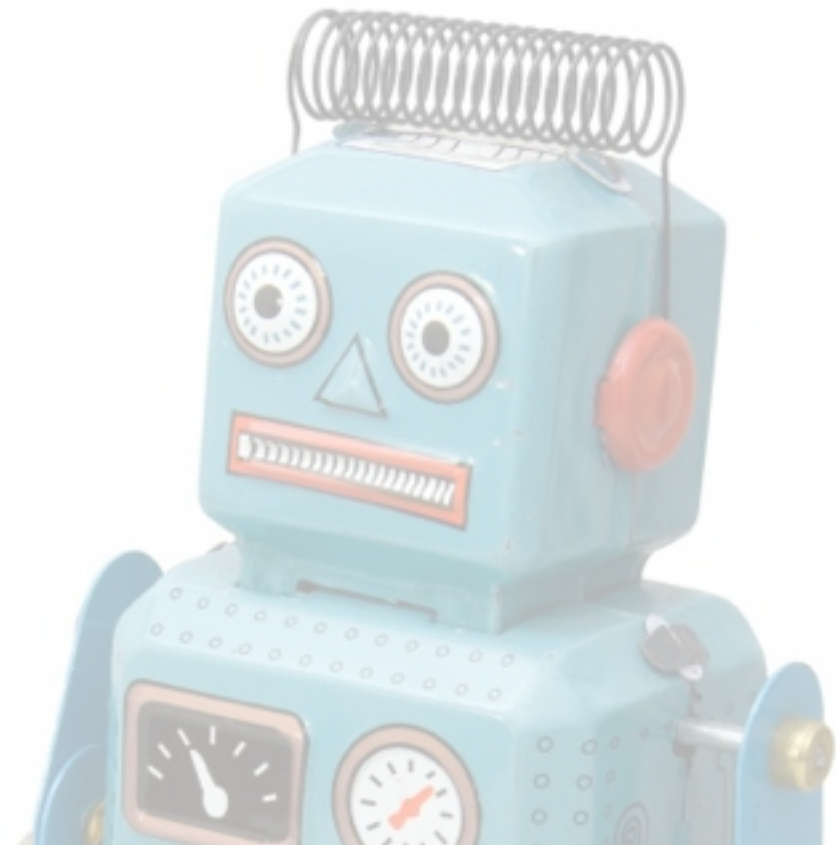


Be careful

4 spacebars

- Page Should Contain  Google

only 1 spacebar



Report

```
spocks-MacBook-Pro:demo spock$ pybot 02_hello.txt
```

```
=====
02 Hello
```

```
=====
Hello World
```

```
| PASS |
```

```
-----
02 Hello
```

```
| PASS |
```

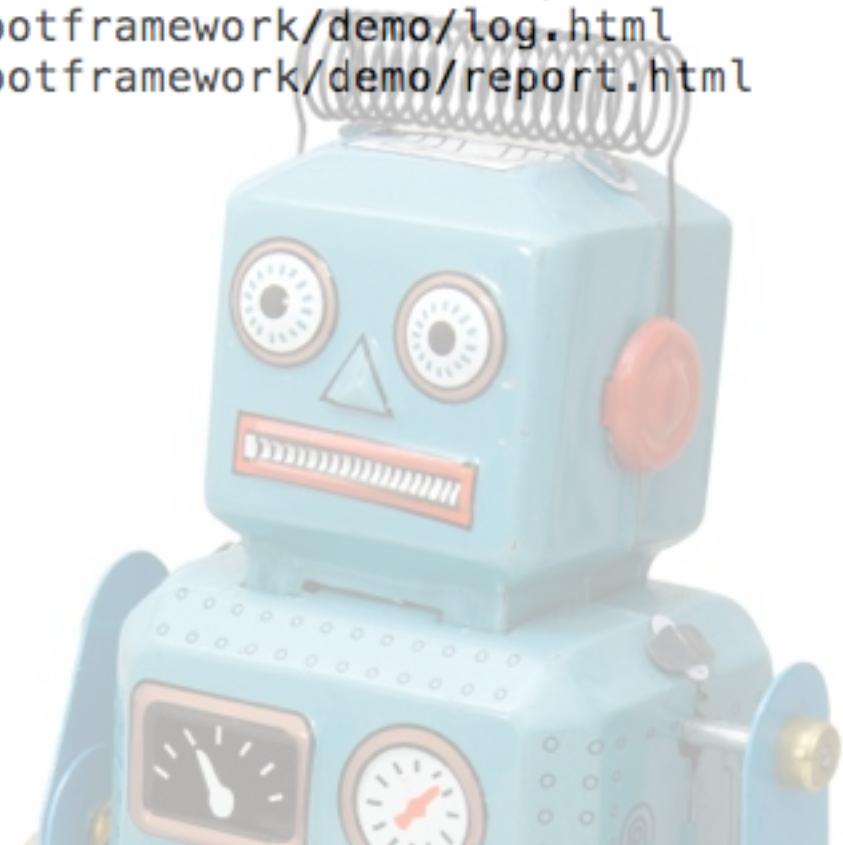
```
1 critical test, 1 passed, 0 failed
```

```
1 test total, 1 passed, 0 failed
```

```
=====
Output:  /Users/spock/somkiat/training/KIMBERLY-CLARK/robotframework/demo/output.xml
```

```
Log:     /Users/spock/somkiat/training/KIMBERLY-CLARK/robotframework/demo/log.html
```

```
Report:  /Users/spock/somkiat/training/KIMBERLY-CLARK/robotframework/demo/report.html
```



Report

02 Hello Test Report

Generated 20140520 23:15:49 GMT +07:00
2 minutes 3 seconds ago

Summary Information

Status: All tests passed
Start Time: 20140520 23:15:42.790
End Time: 20140520 23:15:49.308
Elapsed Time: 00:00:06.518
Log File: [log.html](#)

Test Statistics

| Total Statistics | Total | Pass | Fail | Elapsed | Pass / Fail |
|------------------|-------|------|------|----------|-------------|
| Critical Tests | 1 | 1 | 0 | 00:00:06 | <div></div> |
| All Tests | 1 | 1 | 0 | 00:00:06 | <div></div> |

| Statistics by Tag | Total | Pass | Fail | Elapsed | Pass / Fail |
|-------------------|-------|------|------|---------|-------------|
| No Tags | | | | | <div></div> |

| Statistics by Suite | Total | Pass | Fail | Elapsed | Pass / Fail |
|---------------------|-------|------|------|----------|-------------|
| 02 Hello | 1 | 1 | 0 | 00:00:07 | <div></div> |

Test Details

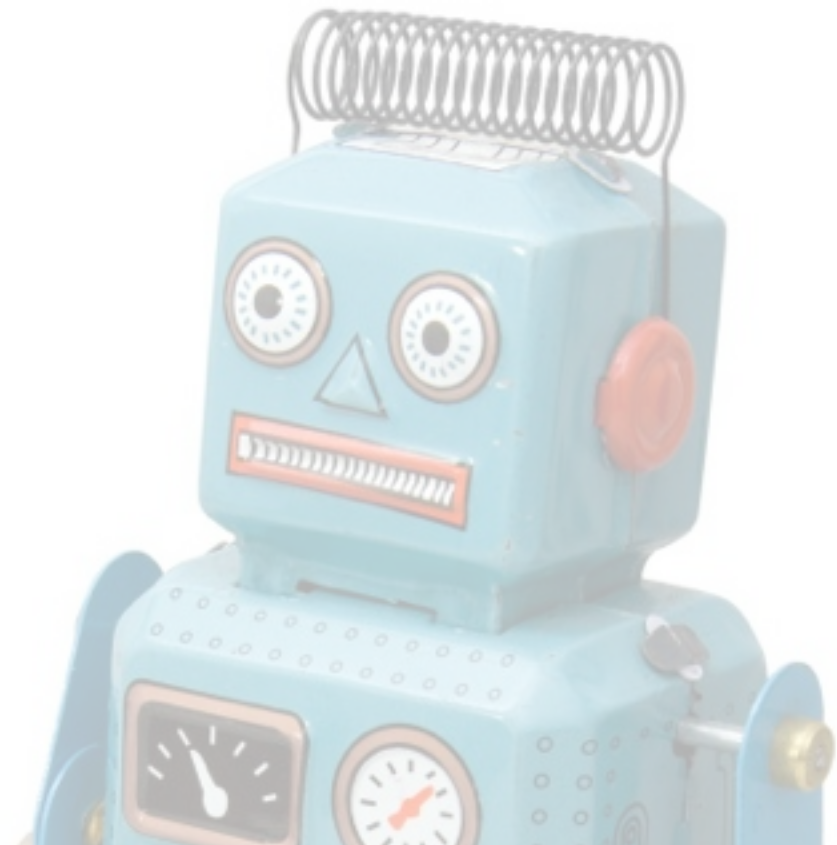
Totals Tags Suites Search

Type: ☐ Critical Tests ☐ All Tests

Workshop

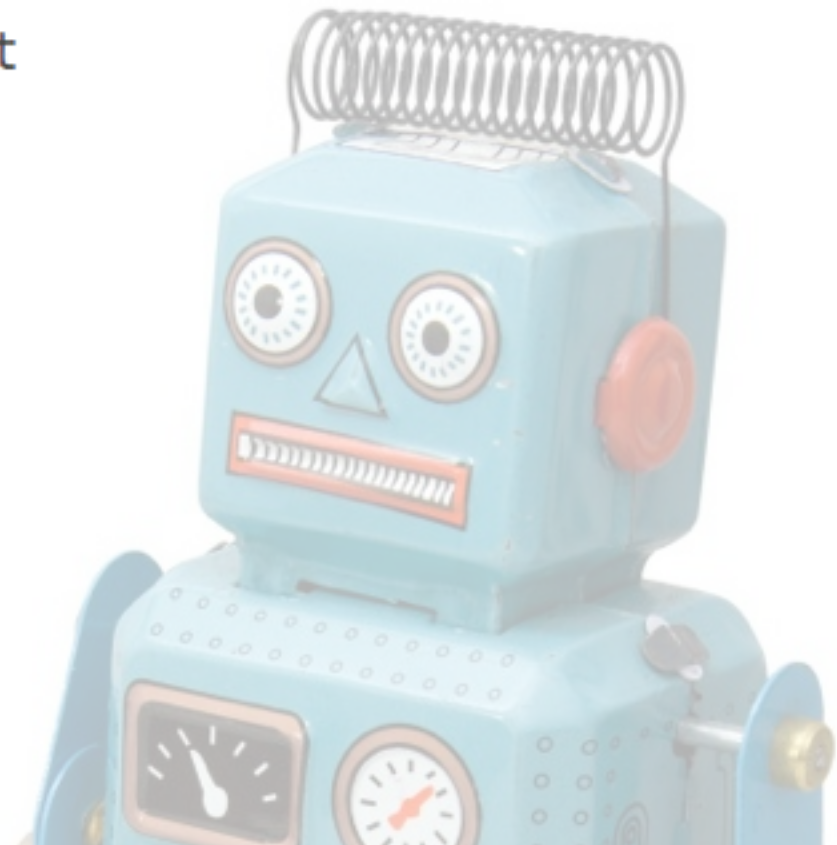
- Create test case with Robot Framework
- Test www.google.com

```
work_01.txt
1  *** Settings ***
2  Library      Selenium2Library
3
4
5  *** Testcases ***
6  Search Data From Google.com
7      XXXXX
8      XXXXX
9      XXXXX
10     XXXXX
11     XXXXX
```



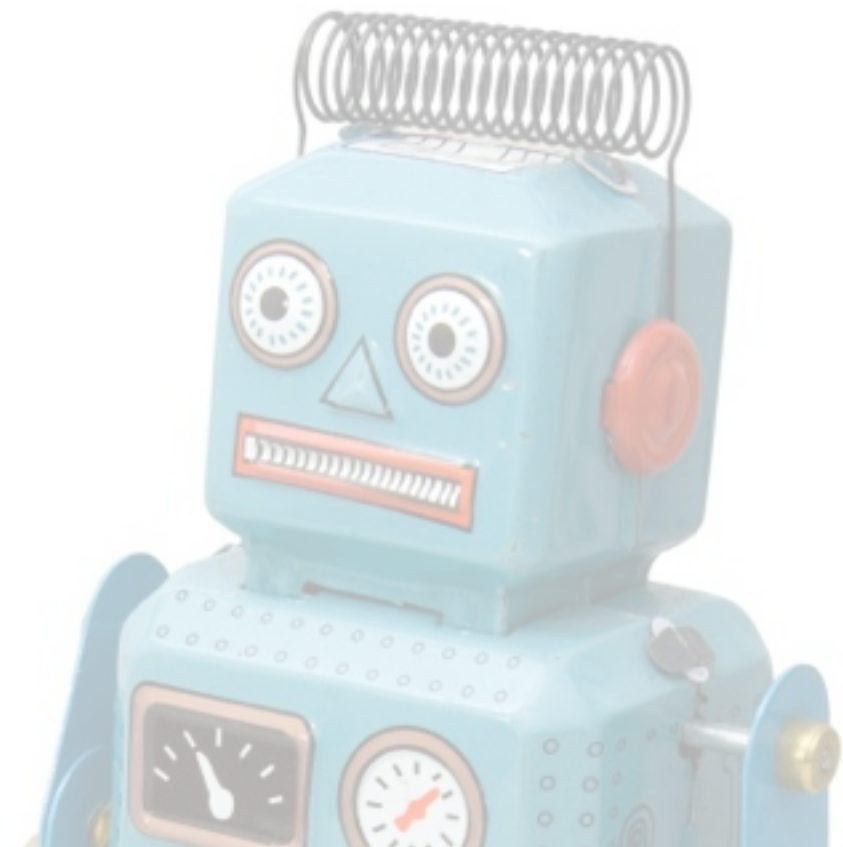
Search with Google

```
work_01.txt  *
1  *** Settings ***
2  Library      Selenium2Library
3
4
5  *** Testcases ***
6  Search Data From Google.com
7      Open Browser      http://google.com
8      Input Text        gbqfq      Somkiat
9      Click Button      gbqfb
10     Wait Until Page Contains      Somkiat
11     Close Browser
```



Workshop

- Create test case with Robot Framework
 - **Demo Login**



Question ?

