Robot Framework

Sample 1：get start

```
*** Settings ***
Documentation       show how to open browser
...                 how to exchange browser

Library             Selenium2Library


*** Test Cases ***
show how to open browser
    Open Browser        http://www.baidu.com
```

- 一个 robot 测试文件的结构

  - Sections：*** Settings *** / *** Test Cases ***

  - Keywords and Arguments, 注意1个空格和大于一个空格的不同含义

- 运行测试的方法：robot   sample.robot   - 依赖于 python

- 了解关键字库

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

    - Selenium2Library -   http://robotframework.org/Selenium2Library/Selenium2Library.html

      - 除了Firefox, 其他的浏览器都需要下载相应的驱动程序放在 PATH 下

Sample 2：maven 工程

```xml
<dependencies>
    <dependency>
        <groupId>org.robotframework</groupId>
        <artifactId>robotframework</artifactId>
        <version>2.8.4</version>
        <scope>test</scope>
    </dependency>
    <dependency>
        <groupId>com.github.markusbernhardt</groupId>
        <artifactId>robotframework-selenium2library-java</artifactId>
        <version>1.4.0.8</version>
        <scope>test</scope>
    </dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.robotframework</groupId>
            <artifactId>robotframework-maven-plugin</artifactId>
            <version>1.4.6</version>
        </plugin>
    </plugins>
</build>
```

- 测试文件缺省路径：/src/test/robotframework/acceptance
- mvn robotframework:run
- 插件文档：http://robotframework.org/MavenPlugin/
- S2Java文档：https://repo1.maven.org/maven2/com/github/markusbernhardt/robotframework-selenium2library-java/1.4.0.8/robotframework-selenium2library-java-1.4.0.8-libdoc.html

Sample 3：简单测试用例

```
*** Settings ***
Documentation        test with library keys

Library              Selenium2Library

*** Test Cases ***
valid login
    Open Browser              http://localhost:7272
    Maximize Browser Window
    Input Text                username_field  demo
    Input Text                password_field  mode
    Click Button              login_button
    Location Should Be        http://localhost:7272/welcome.html
    Title Should Be           Welcome Page
```

- 直接使用库中的关键字
- 可改进之处：
  - 数据重复
  - 表述测试的关键字最好是业务相关的，而不是实现相关的

Sample 4, Define DSL with User Keywords

```robotframework
*** Variables ***
${SERVER}          localhost:7272
${LOGIN_URL}       http://${SERVER}/
${WELCOME URL}     http://${SERVER}/welcome.html
${WELCOME TITLE}   Welcome Page


*** Test Cases ***
Valid Login
    Open Browser To Login Page
    Input Username              demo
    Input Password              mode
    Submit Login
    Welcome Page Should Be Open


*** Keywords ***
Open Browser To Login Page
    Open Browser                ${LOGIN_URL}
    Maximize Browser Window

Input Username
    [Arguments]                 ${username}
    Input Text                  username_field      ${username}

Input Password
    [Arguments]                 ${password}
    Input Text                  password_field      ${password}

Submit Login
    Click Button                login_button

Welcome Page Should Be Open
    Location Should Be          ${WELCOME URL}
    Title Should Be             ${WELCOME TITLE}
```

- 改进：使用 resource file

Sample 5：使用模板

```robotframework
*** Settings ***
Documentation
...

Resource            resource.robot
Suite Setup         Open Browser To Login Page
Suite Teardown      Close Browser
Test Setup          Go To Login Page
Test Template       Failed Login


*** Test Cases ***
Invalid Username                    invalid         ${VALID PASSWORD}
Invalid Password                    ${VALID USER}   invalid
Invalid Username And Password       invalid         whatever
Empty Username                      ${EMPTY}        ${VALID PASSWORD}
Empty Password                      ${VALID USER}   ${EMPTY}
Empty Username And Password         ${EMPTY}        ${EMPTY}


*** Keywords ***
Failed Login
    [Arguments]        ${username}      ${password}
    Input Username                ${username}
    Input Password                ${password}
    Submit Login
    Login Should Have Failed


Login Should Have Failed
    Location Should Be      ${ERROR URL}
    Title Should Be         Error Page
```

•关键字驱动与数据驱动