# The task

How would you test login/registration UI functionality of your favorite website (e.g. https://stackoverflow.com)?

Steps:

1. Choose your favorite website which has a login/registration flow.
2. Write test cases for a given part of the functionality. It can be only login flow, or

only registration flow, or both. Feel free to choose.

1. Implement automated tests for up to three test cases from this list.

# Preconditions

1. Only **login** cases are listed
2. The time for test task is limited, so I choose **non strict style of test-case describing**, however in formal documentation I would fill all the necessary information for the case (exact values of password, login, OS, browser ets, detailed test steps)
3. When I am thinking of registration/login testing I take into account aspects listed below. But the number and exact suite of cases in real work would depend on: time, quality expectations, type of testing (first or regression, manual or automated etc) etc
4. Due to a large number of possible cases I describe **the part of them**

Aspects of testing

1. Password/Login

* Valid, invalid
* Length: 0, 1 symbol, min length, few symbols, max length, max length+1
* Symbols: letters, digits, special symbols, encoding (English, Russian, Chinese), case sensitivity , blanks
* Email as login peculiar properties: empty first or second part, incorrect domain, email with “.” etc
* Input type: typing, copying

1. Login via social network

* Valid, invalid credentials
* User is logged/not logged in the social network at the moment in the current browser

1. Security (basic)

* SQL injection
* Script injection
* Html-tags

1. Configurations

* OS
* Browser
* Locale

1. Kind of load testing etc

* Manual: login with invalid credentials many times
* Automated: lot of requests per time etc

1. Scenarios

* Forgot password
* Login and logout in different browsers/devices in the same time
* Login with credentials recently removed user
* Click Back button in the browser after entering credentials but before submitting it
* Caps lock notification

Test data comments

1. <http://stackoverflow.com/> site was choosing for testing
2. Email is used as a login in site chosen, so some of usual cases are not applicable, but some other cases caused by email are added

# Results : part 1

For all **successful** logging in I would check:

* main application page is shown
* correct username is shown as a tooltip of user avatar

For **not** **successful** logging in I would check:

* no users are logged in (no avatar, no tooltip)
* appropriate indication about problem is shown

Cases

1. Credentials
2. Valid email, valid password (few symbols, Latin letters and digits). Expected: success login
3. Min length email, min length password. Expected: success login
4. Max length email, max length password (use all valid special symbols for email and password). Expected: success login
5. Empty email and valid password. Expected: appropriate error message
6. Valid email and empty password. Expected: appropriate error message
7. Empty email and password. Expected: appropriate error message
8. Invalid email, valid password. Expected: appropriate error message
9. Valid email, invalid password. Expected: appropriate error message
10. Password and/or email contains Russian/Chinese symbols. Expected: depends on site restrictions
11. Valid email with all letters in uppercase instead of normal, valid password. Expected: success login
12. Valid password with all letters in uppercase instead of normal, valid email. Expected: appropriate error message
13. Login with username instead of email and valid password. Expected: appropriate error message
14. Add blanks before and after email, valid password. Expected: success login
15. Add blanks before or after password, valid email. Expected: appropriate error message
16. Not existent domain in email, valid password. Expected: appropriate error message
17. Not correct email format, valid password(expected: error message)
18. Copy email and password form another doc and paste it. Expected: success login
19. Social network accounts
20. Login with valid credentials a)Google b)Facebook c)AOL d)LiveJournal e)AOL f)Blogger g)OpenID accounts if user is already logged in social network. Expected: success login
21. Login with valid credentials a)Google b)Facebook c)AOL d)LiveJournal e)AOL f)Blogger g)OpenID accounts if user is not logged in social network. Expected: success login
22. Login with invalid credentials a)Google b)Facebook c)AOL d)LiveJournal e)AOL f)Blogger g)OpenID accounts. Expected: appropriate error message
23. Security
24. Test css injection: Input <script>alert(123)</script> to the email field, valid password and vice versa
25. Test html-tags: Input <form action=”http://live.hh.ru”><input type=”submit”></form> to the email field, valid password and vice versa
26. Test sql injection: Input "user' OR 1=1--" to the email field, valid password and vice versa
27. Multi-login
28. Login different browsers/devices in the same time (expected: user is able to login in more than once), logout in one of the browsers. Expected: user is logged in in all other devices)
29. Try to login with invalid credentials a lot of times quickly. Expected: request to fill the capture / user blocking / nothing/ etc
30. Other
31. Login with valid normal user credentials “Log in on Talent”. Expected: appropriate error message
32. Recover password clicking “forgot?” link. Expected: password recovered correctly
33. Remember credentials in browser, try to log in and log out. Expected: correct log in with remembered credentials
34. Login with credentials of recently removed user. Expected: appropriate error message
35. Change users credentials, logout and try to login with old credentials. Expected: appropriate error message
36. Press Caps Lock and try to login with valid credentials. Expected: warning message
37. Enter valid credentials (but do not submit it), click Back button in the browser, go to the homepage. Expected: user is not logged in
38. Configuration testing

Most of the tests should be performed on the 1 or 2 main configurations (for example Win 10 (En) + Google Chrome, Mac OS 10.11(Ru) + FireFox), few tests should be performed on every significant OS and browser.

# Results : part 2

1. Three test cases were implemented for the login process:
2. Valid email, valid password (few symbols, Latin letters and digits)

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| N | **Description** | **Expected result** |
| 1 | Open homepage: enter http://stackoverflow.com/ in browser | http://stackoverflow.com/ is opened  No user is logged in: “sign up” and “log in” links are visible in the top of the page |
| 2 | Click the “log in” link in the right upper part of the page | Login form is opened.  Form contains:   * Email, password inputs * Log in button |
| 3 | Input valid email “nastyakuz@front.ru” into email field  Input valid password “qwer1234” into password field  Click Log in button | Internal page with logged in user is shown:  User avatar is shown in the top of the page |
| 4 | Move mouse over the user avatar | Tooltip with username “nastya\_test” is shown |
| 5 | Click StackExchange menu in the left top part of the page | See dropdown menu with the “log out” link |
| 6 | Click “log out” link | Log out page is shown:  “Log Out” button is shown |
| 7 | Click “Log Out” button | http://stackoverflow.com/ is opened  No user is logged in: “sign up” and “log in” links are visible in the top of the page |

1. Invalid email, valid password

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| --- | --- | --- |
| N | **Description** | **Expected result** |
| 1 | Open homepage: enter http://stackoverflow.com/ in browser | http://stackoverflow.com/ is opened  No user is logged in: “sign up” and “log in” links are visible in the top of the page |
| 2 | Click the “log in” link in the right upper part of the page | Login form is opened.  Form contains:   * Email, password inputs * Log in button |
| 3 | Input invalid email “n635865abc@front.ru” into email field  Input valid password “qwer1234” into password field  Click Log in button | User is not logged in  Error message is shown: “The email or password is incorrect.” |

1. Valid email, invalid password

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| --- | --- | --- |
| N | **Description** | **Expected result** |
| 1 | Open homepage: enter http://stackoverflow.com/ in browser | http://stackoverflow.com/ is opened  No user is logged in: “sign up” and “log in” links are visible in the top of the page |
| 2 | Click the “log in” link in the right upper part of the page | Login form is opened.  Form contains:   * Email, password inputs * Log in button |
| 3 | Input invalid email “nastyakuz@front.ru” into email field  Input valid password “pass879790” into password field  Click Log in button | User is not logged in  Error message is shown: “The email or password is incorrect.” |

1. Project contains

2.1) **relayr\_test\pages**\: implementation of different type of Web Pages (hierarchical page tree).

Page object contains elements (locators) unique for this page type.

Page tree:

-page->any\_page->init\_page->login\_page

…->internal\_page->logout\_page

2.2) **relayr\_test\model**\: contains objects that modelling different objects used for correct application work.

Contains Application model object that interacts with Web pages and hides the details from the tests level.

Objects: Application, User

2.3) **relayr\_test\resources\config.py**: project parameters such as log filename, valid credentials, base url (could be used for testing in different environments)

2.4) **relayr\_test\conftest.py**: pytest fixtures configuration file. Contains 'session'-level fixtures and command string parser

2.5) **relayr\_test\site\_tests\_file**: files with tests, contains 3 implemented tests

2.6) **relayr\_test\resources\log.txt**: log file

2.7) **relayr\_test\ENV\:** virtual environment for test running

1. How to run tests from console
2. Launch tests with the following command:

<Project path>\relayr\_test\ENV\Scripts\python -m pytest <Project path>\relayr\_test\site\_tests\_file.py

1. Check results in console output
2. Check log file <Project path>\relayr\_test\resources\log.txt