TeamCity Test Tasks Overview

This project introduces the test cases and scenarios for the TeamCity server version 2022.10.2 (build 117025), created in the scope of the test assignment for the TeamCity recruitment process for the position of QA Automation Engineer.

Task 1

The list of test cases for the TeamCity login page can be found in the table 1. Such testing types as functional, UI and security testing are covered.

The result of manual execution of the mentioned test cases:

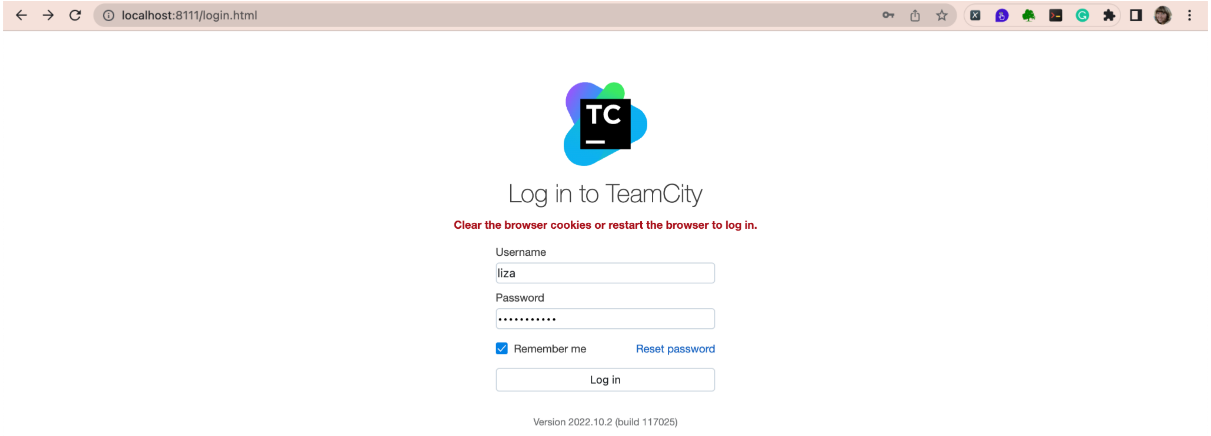
- Functional testing - 9 tests: 9 passed ✓; 0 failed ✘; 0 skipped ☐
- UI testing - 3 tests: 3 passed ✓; 0 failed ✘; 0 skipped ☐
- Security testing - 6 tests: 5 passed ✓; 1 failed ✘; 0 skipped ☐

For the failed test the following bug ticket is created:

TC-1: Login page -> Clicking back button causes browser error
Project: TeamCity; **Version:** 2022.10.2 (build 117025); **Env:** Production
Priority: Medium; **Severity:** Major
Steps to reproduce:

1. Go to login page
2. Put correct username and password
3. Click "Log in" and wait to be redirected to the Projects page
4. Click "back" button

Expected result: user stays logged in, user stays at the Projects page
Actual result: user is sent back to login page with a browser error (see attachment), user stays logged in (verified with using "forward" button or pasting the user's project URL)



localhost:8111/login.html

Log in to TeamCity

Clear the browser cookies or restart the browser to log in.

Username
liza

Password
••••••••••••

☑ Remember me   Reset password

Log in

Version 2022.10.2 (build 117025)

Task 2

The list of test scenarios for the TeamCity can be found in the table2.
In these scenarios a TeamCity project is created, which fits the following prerequsties:

- started a TeamCity server instance on localhost port 8111
- having existing administrator user
- project is availiable on GitHub with the known URL
- project uses the Maven build system

Sample code used in this flow: https://github.com/mkjetbrains/SimpleMavenSample

In the companies, where I worked, the scenarios were defined differently. In one, one scenario is the whole flow with specific configurations, and in another one scenario covered one feature. In the scope of this task, I decided to introduce the scenarios, based on steps of the workflow process, and dependent on the described project configuration properties.

The introduced test scenarios cover the happy-flow workflow including the following scenarios:

- login as administrator user
- check the presence of an agent
- create a project
- Auto-detect build steps for this project's build configuration
- execute a build

With these scenarios, the following requirements of TeamCity are covered:

- the user data is stored and can be used for login
- the project can be added using URL path
- projects based on Maven build system can be added
- build steps for Maven can be auto-detected
- the project build can be executed succesfully

These scenarios I found the most important and covering the most important steps of the TeamCity workflow.

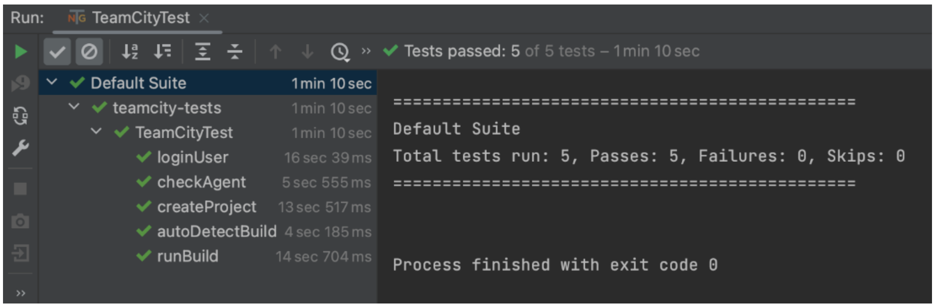
Additionaly, the following scenarios could be considered

- creating a project with a pre-configured pipeline
- overwrite the general settings (e.g. name of the project)
- overwrite build configuration e.g. add build step
- artifact paths - e.g. verify that we are able to download the built application
- triggers - e.g. specify when the build is run (schedules)
- create a build template and use it

- add a parameter and verify that it's available in a build
- build overview tabs analysis and adding the new tabs

I automated these scenarios using TestNG and Selenium frameworks on Kotlin.
Code can be found on GitHub: https://github.com/LizaSold/teamcity-tests
The steps to execute the code are described in README file.
Reports screenshot and video can be found in the folder /reports.
Mentioned tables with scenarios description can be found in the folder /tables.

The result of automated execution of the mentioned scenarios:



✓ Tests passed: 5 of 5 tests – 1 min 10 sec

```
✓ Default Suite            1 min 10 sec
  ✓ teamcity-tests         1 min 10 sec
    ✓ TeamCityTest         1 min 10 sec
      ✓ loginUser          16 sec 39 ms
      ✓ checkAgent         5 sec 555 ms
      ✓ createProject      13 sec 517 ms
      ✓ autoDetectBuild    4 sec 185 ms
      ✓ runBuild           14 sec 704 ms
```

```
===============================================
Default Suite
Total tests run: 5, Passes: 5, Failures: 0, Skips: 0
===============================================


Process finished with exit code 0
```

Thank you for reading this report and looking into the code. Looking forward to hearing your feedback.