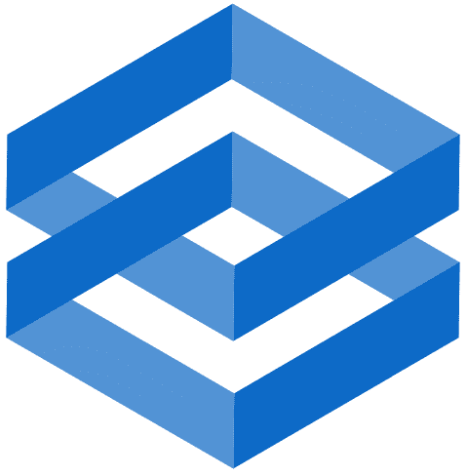


KeyCloud

Agenda

- Vision
- SRS
- Scopes
- Project Methodology
- Time Estimation
- Risk Management
- Demo
- Architecture
- Configuration
- Automation
- Tests

Vision

Encryption

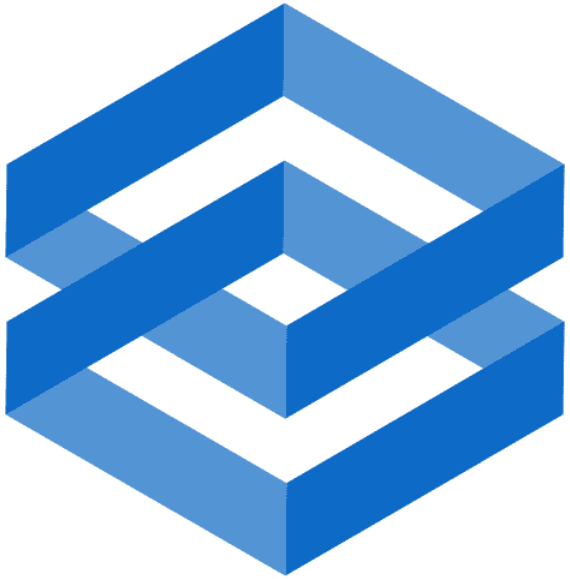
Secure cloud credentials storage

Android Autofill Service

Secure data transfer

Dashboard

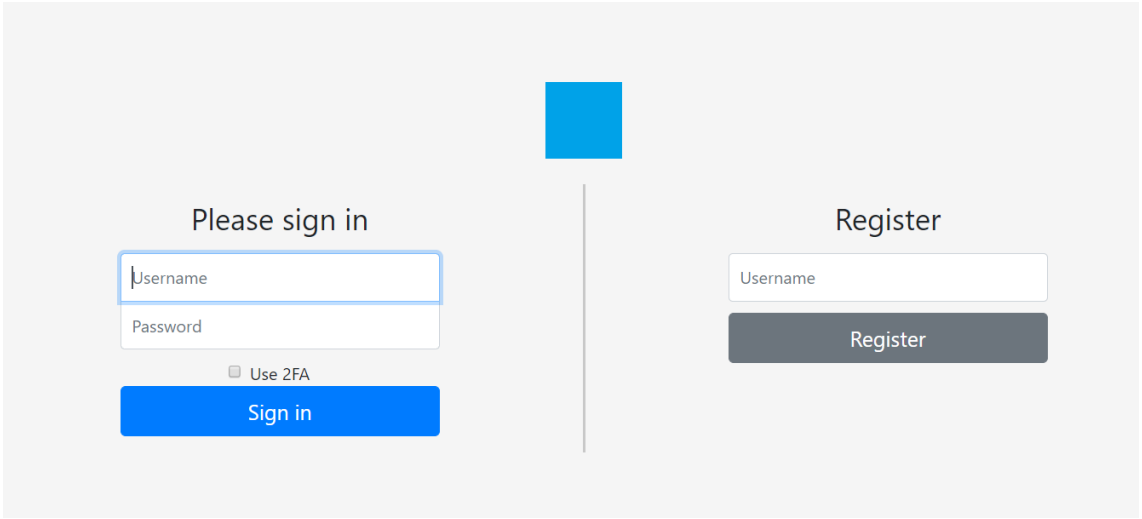
Chrome plugin



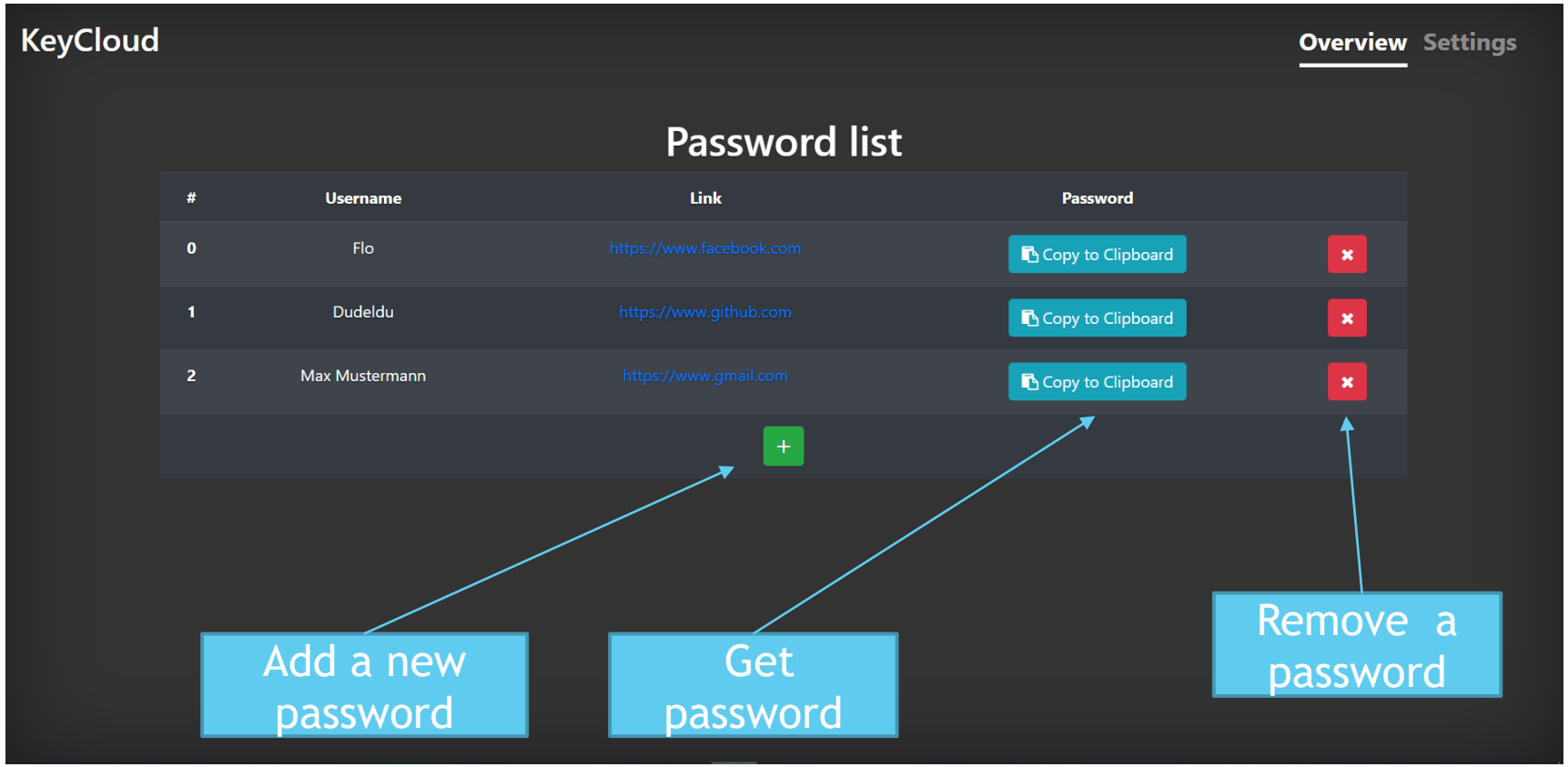
Software Requirements

- Simple interfaces with maximum functionality
- Secure and high availability
- Clean Code and use of best practices
- Easy to maintain
- SRS https://github.com/keycloud/docs/blob/master/doc/SRS.md

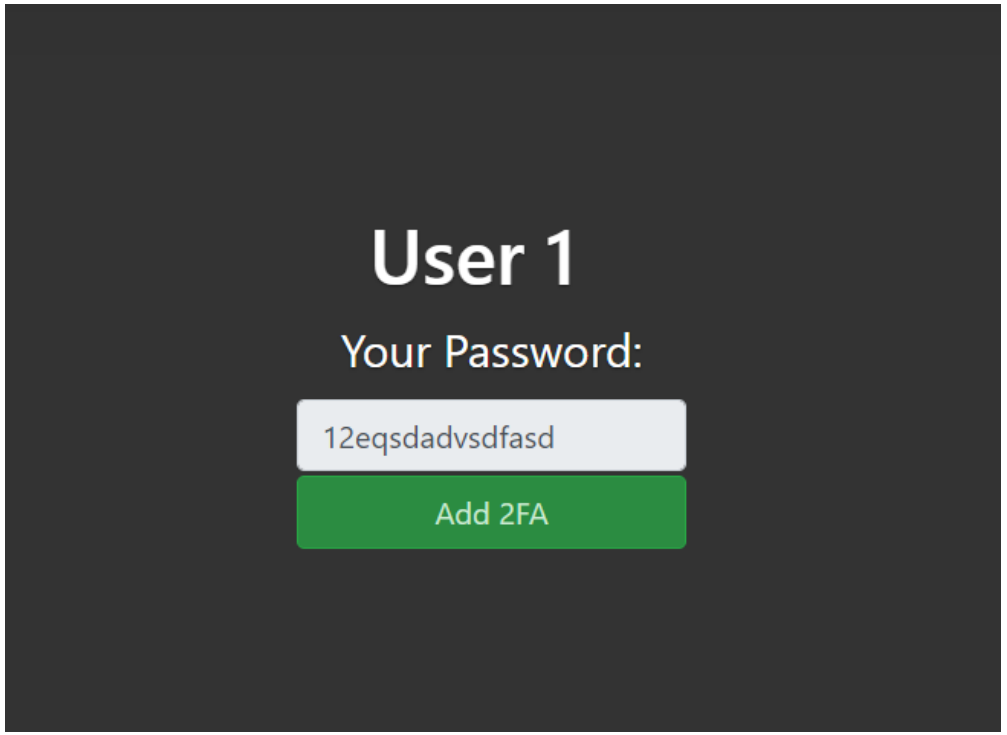
Scopes


Please sign in
Username
Password
Use 2FA
Sign in
Register
Username
Register

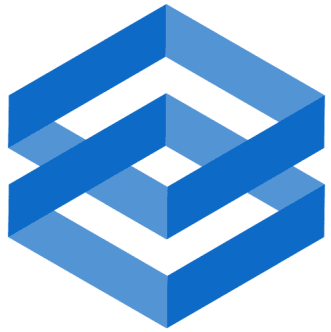
Scopes


KeyCloud
Overview
Settings
Password list
#
Username
Link
Password
0
Flo
https://www.facebook.com
Copy to Clipboard
1
Dudeldu
https://www.github.com
Copy to Clipboard
2
Max Mustermann
https://www.gmail.com
Copy to Clipboard
+
Add a new password
Get password
Remove a password

Scopes



Project Methodology



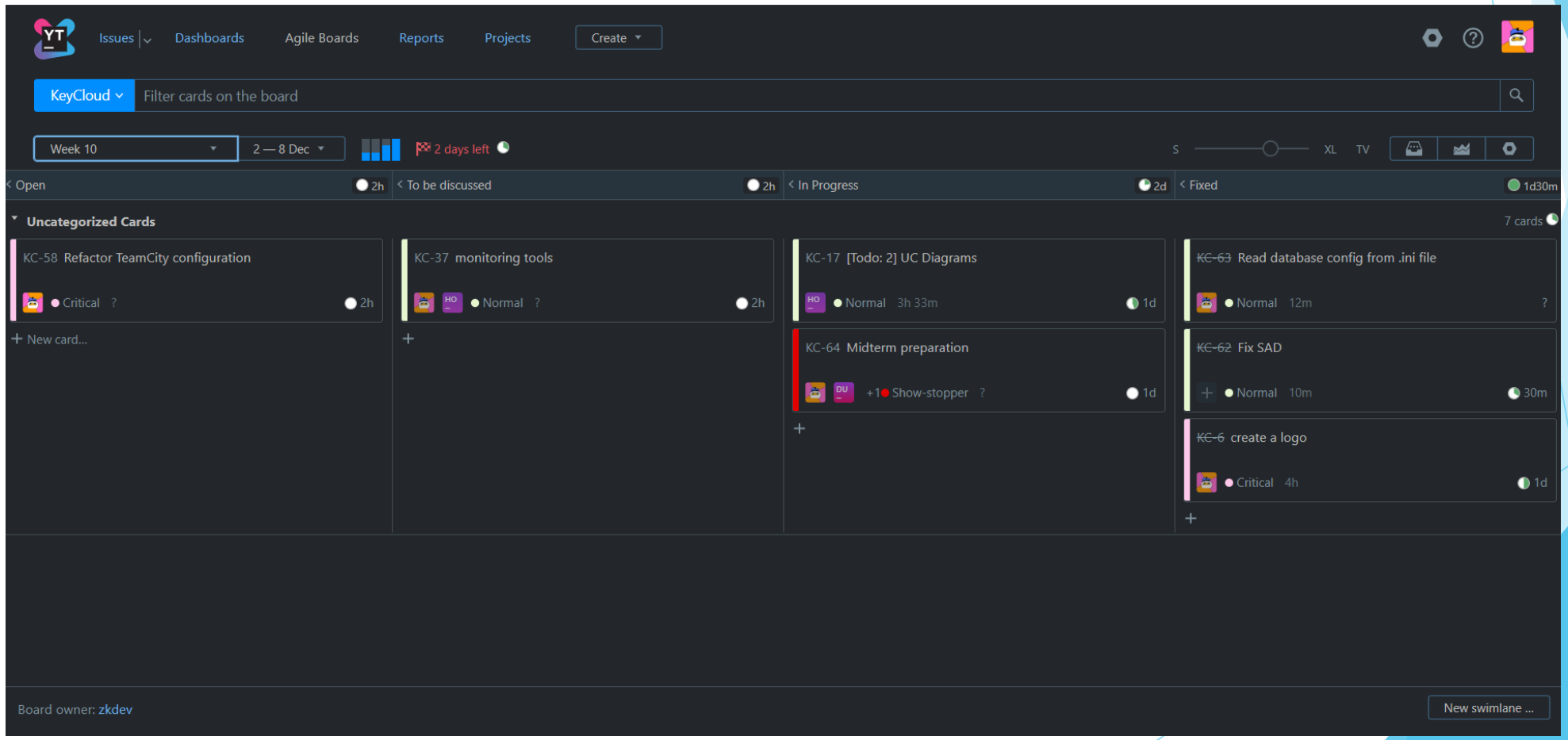
- Scrum (1 week sprint)
- Flat hierarchies
- Roles according to RUP (Rational Unified Process) terminology

Iterative Process

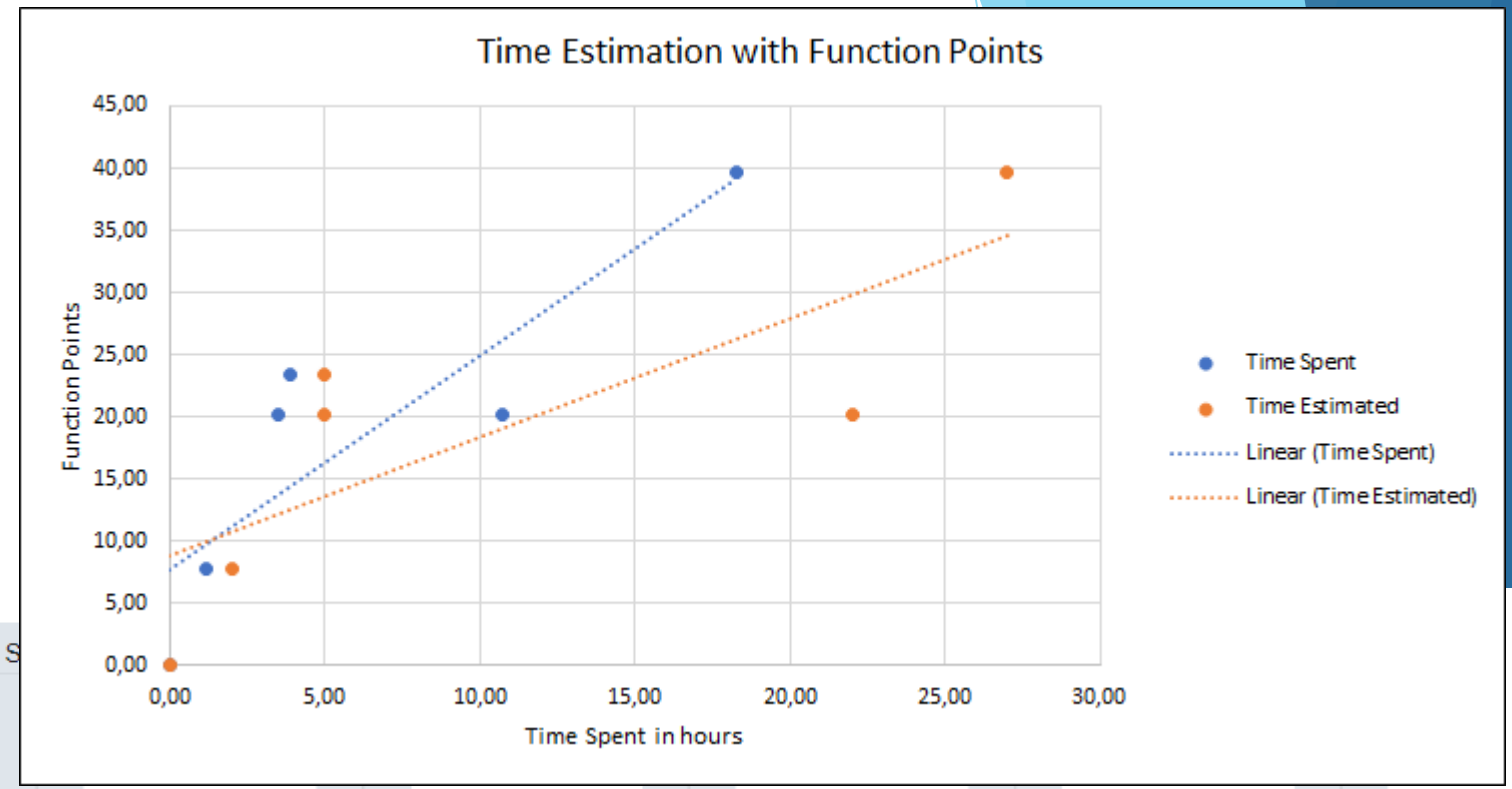
- Agile work environment
- Scope can be adjusted to fit the needs of the customer

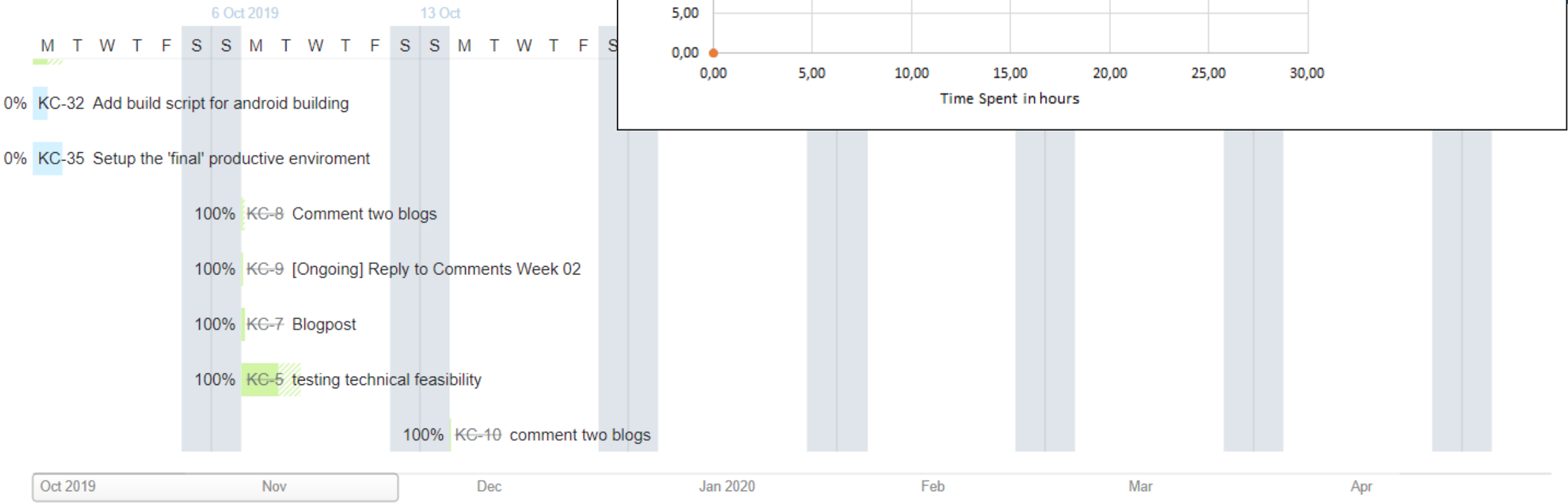
Project Management

- Agile board (YouTrack)



Time Estimation



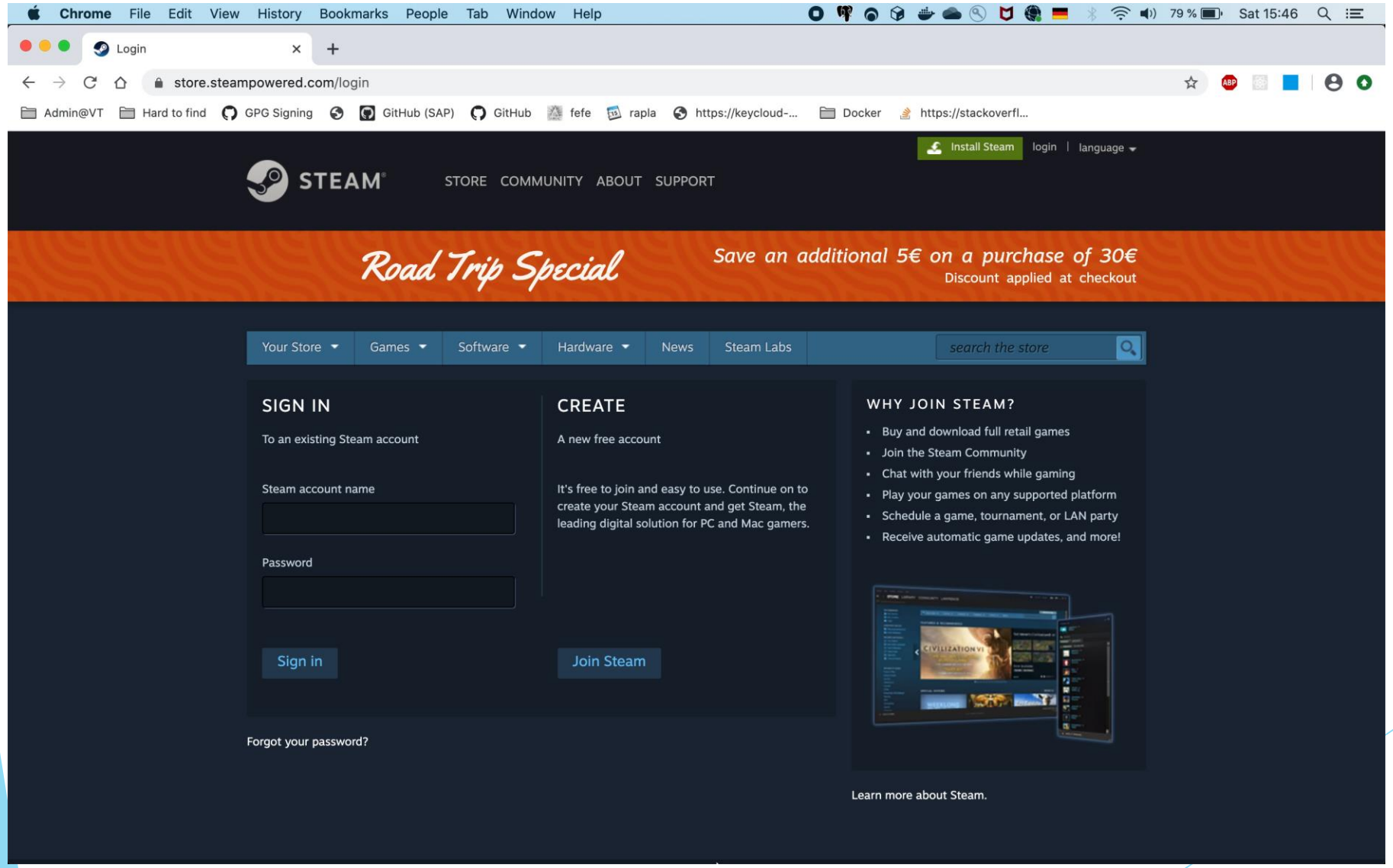


Risk Management

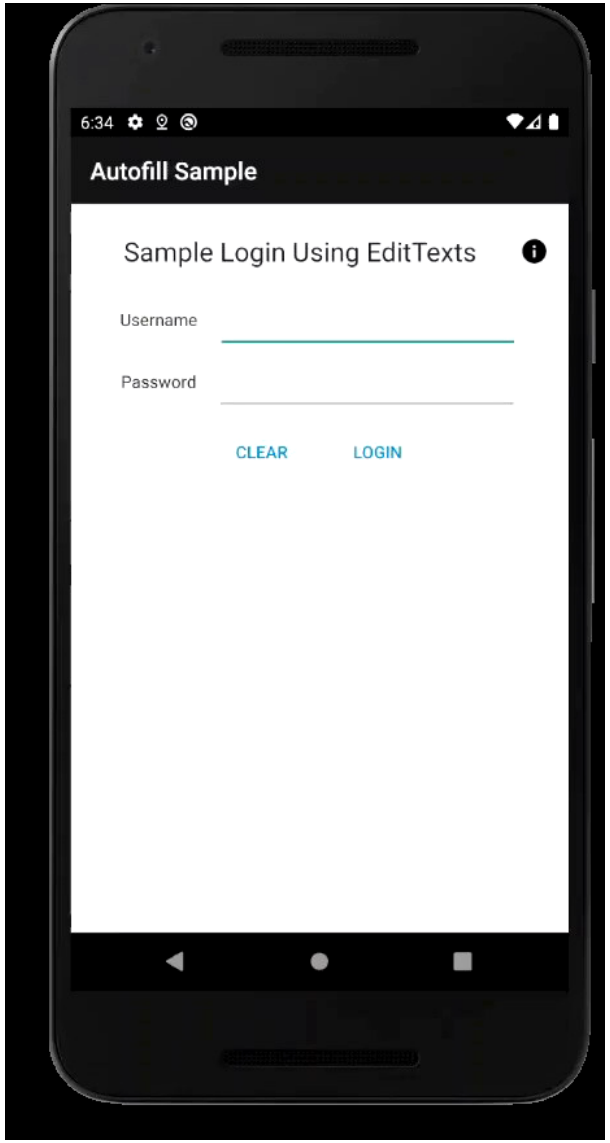
Risk	Prob. of Occurrence	Damage	Mitigation Strategy	Risk factor
Landscape Migration	medium	high	Backup strategy, switch back to old hosting solution, that already worked	high
Time delay	high	medium	Rebalance work load between team members, at least after the week on the next sprint meeting	medium
Disagreement	medium	medium	Open discussion, realignment, democratic choice out of three	medium
Underestimation of complexity	low	high	redefine scope	medium
Sickness	low	medium	Know each others code well, worst-case: redefine scope	low
Data loss	low	low	Accurate git version control usage	low

Demo

Further Functions

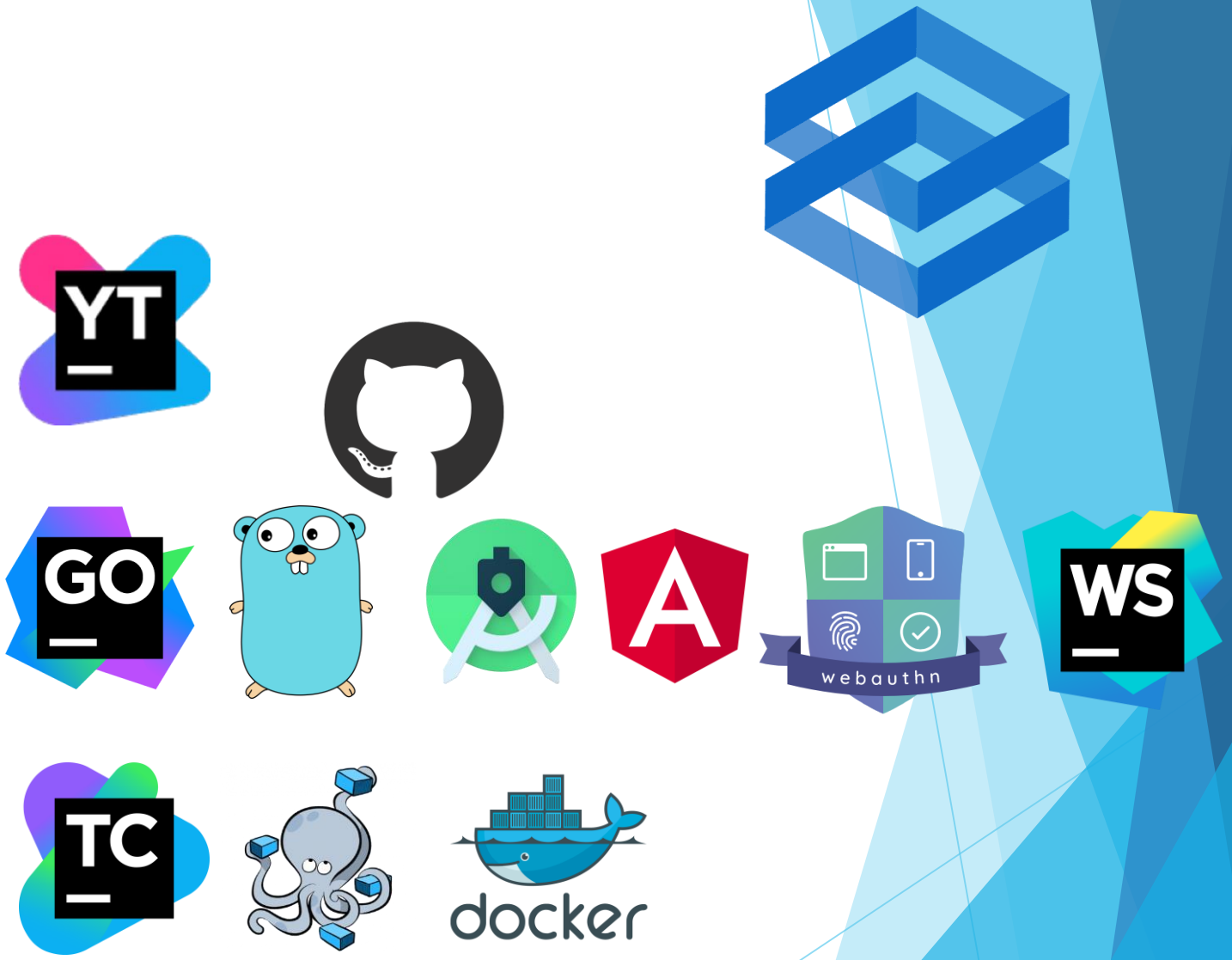


Further Functions

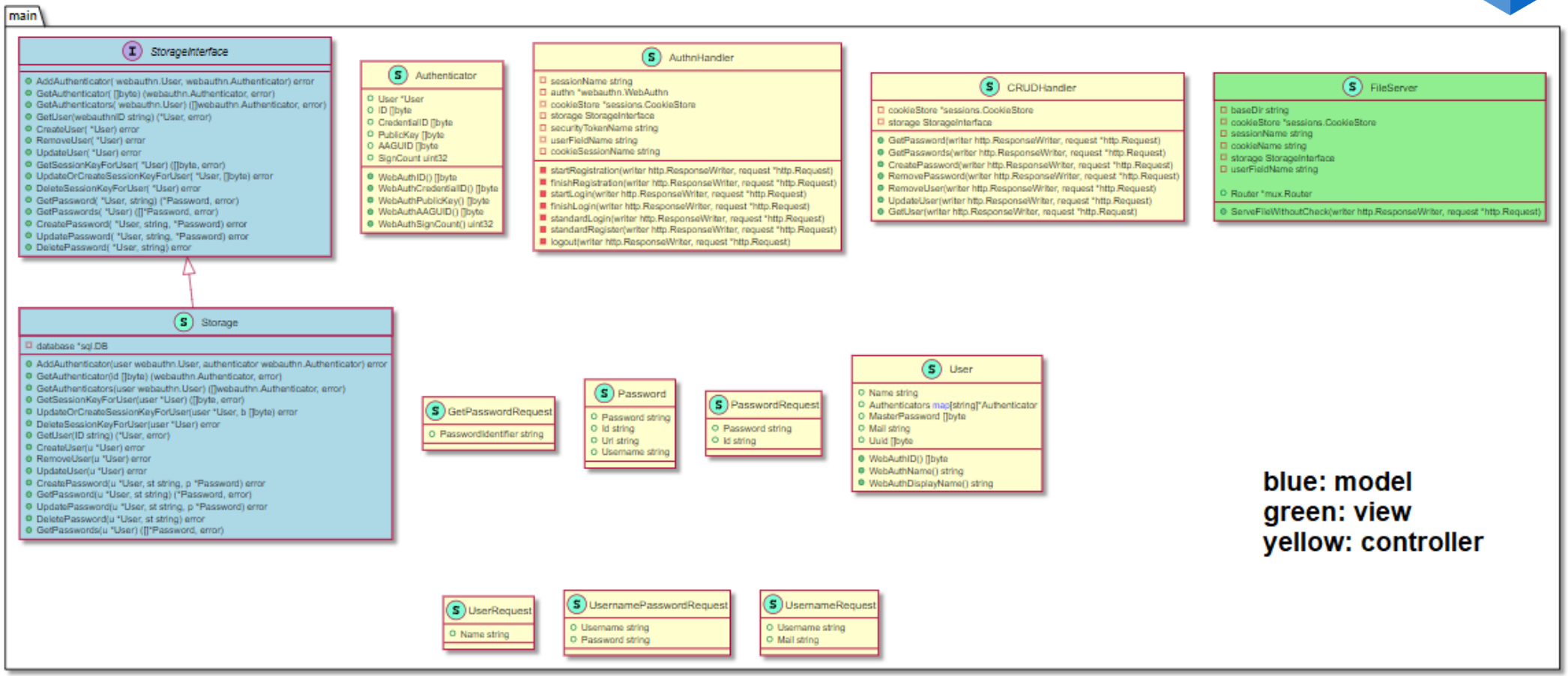


Technology Stack

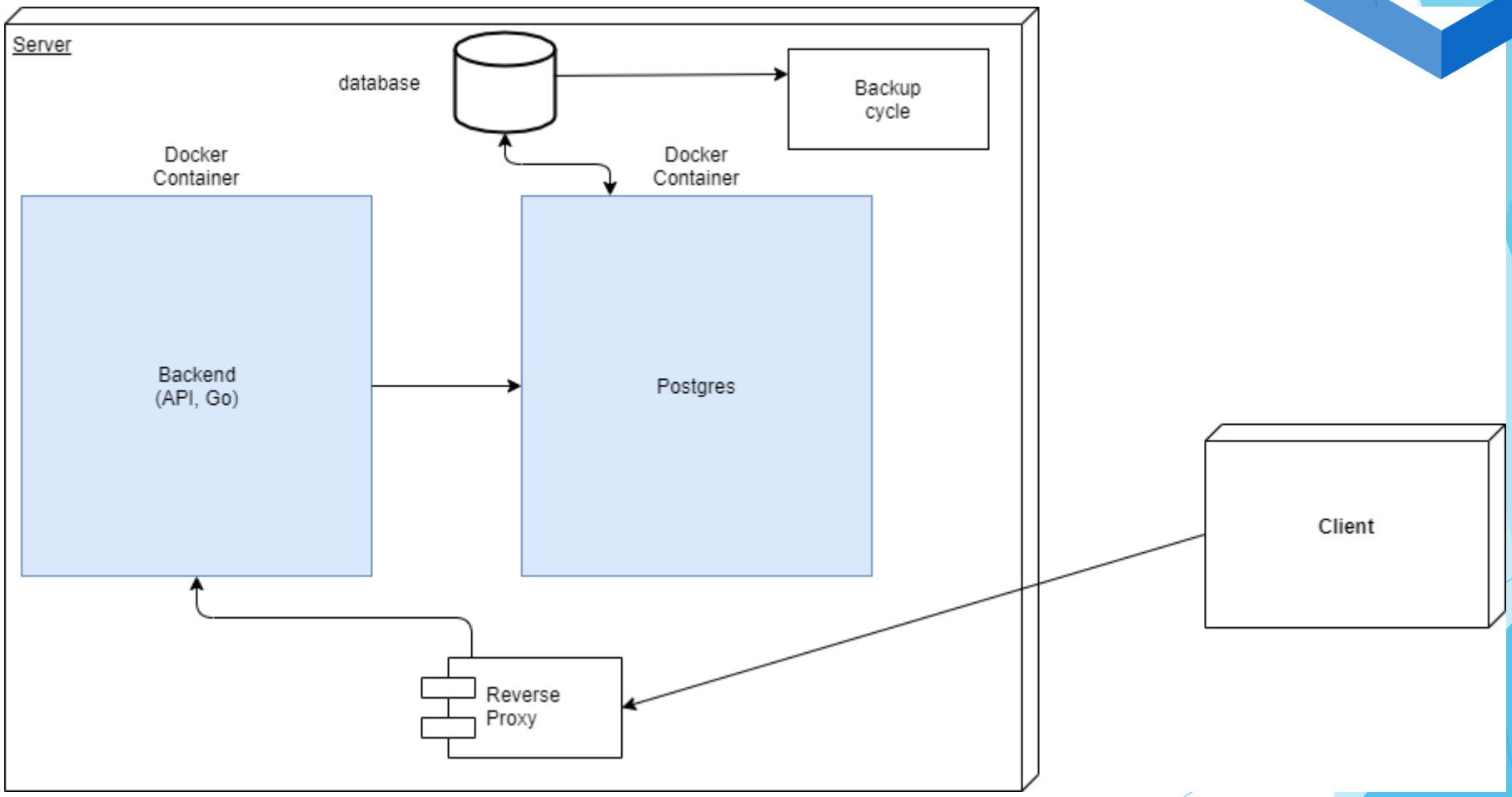
- PROJECT MANAGEMENT
- DEVELOPMENT
- CI/CD



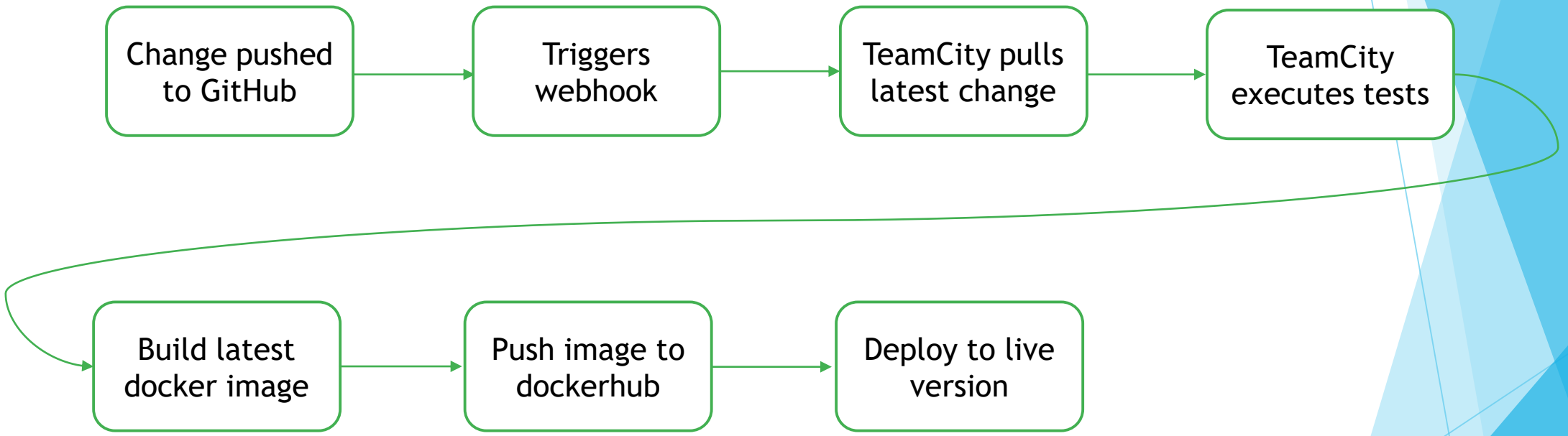
Class Diagramm



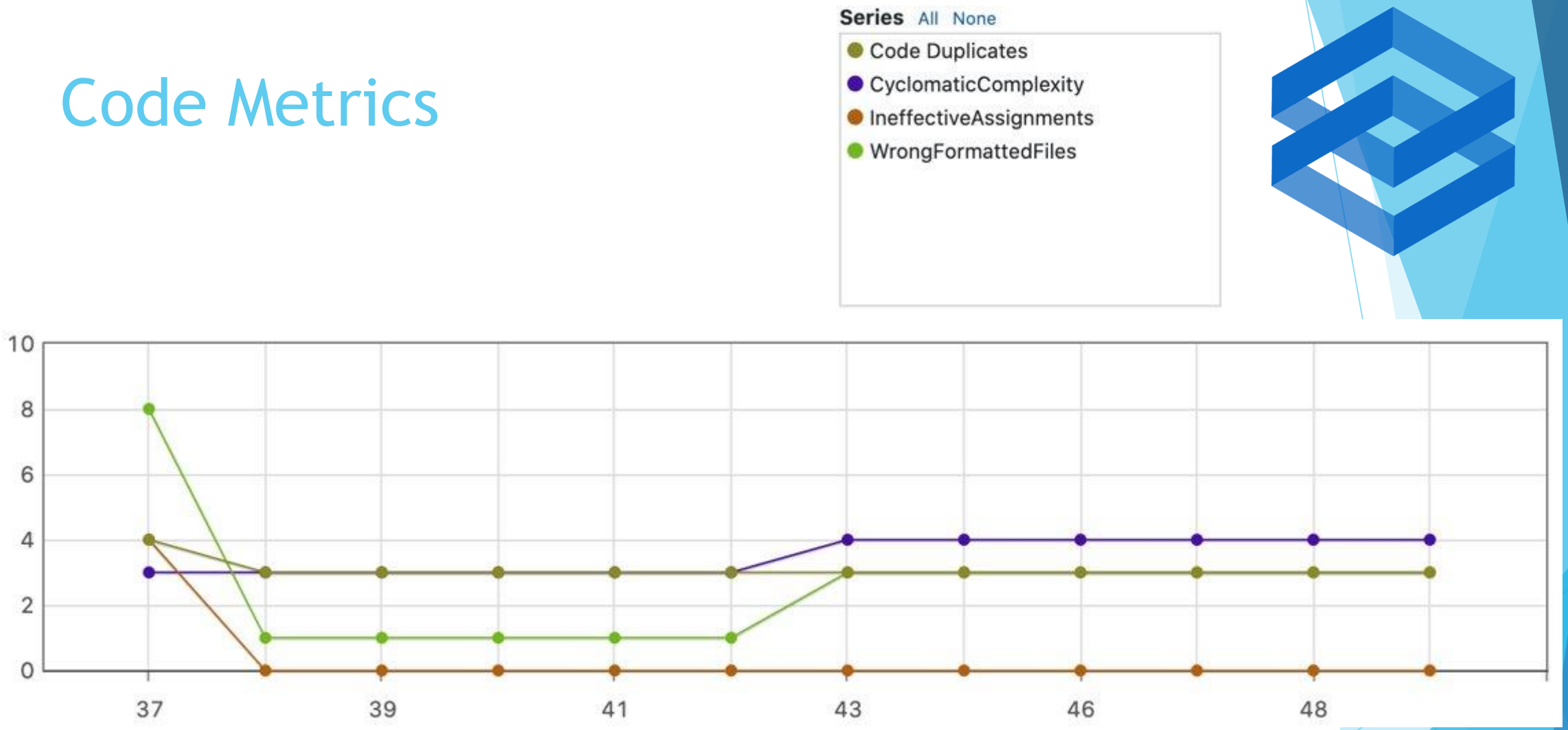
Configuration



Automation


Change pushed to GitHub
Triggers webhook
TeamCity pulls latest change
TeamCity executes tests
Build latest docker image
Push image to dockerhub
Deploy to live version

Code Metrics



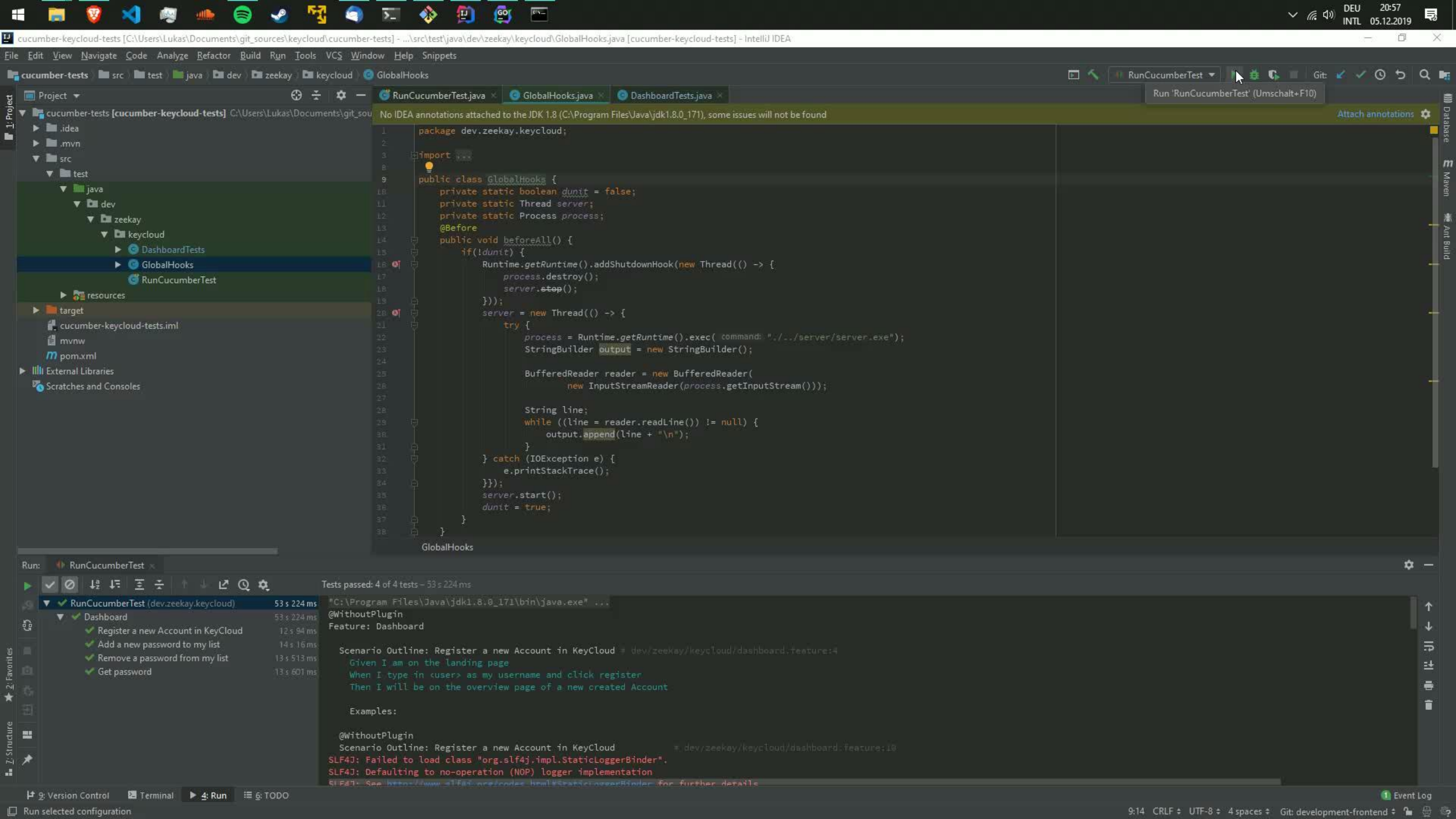

```
router.Handle("/user", crud.GetUser).methods("get")
router.Handle("/user", crud.RemoveUser).methods("delete")
router.Handle("/user", crud.UpdateUser).methods("put")
```

Tests

- Cucumber
- Unittests (go tests)
- Karmatests (Angular)
- External Testperson

```
=============================== Coverage summary ===============
Statements   : 27.17% ( 75/276 )
Branches     : 3.57% ( 1/28 )
Functions    : 23.17% ( 19/82 )
Lines        : 24.81% ( 64/258 )
================================================================
```

```
=== RUN   TestAuthnHandler_standardLogin
--- PASS: TestAuthnHandler_standardLogin (0.01s)
=== RUN   TestAuthnHandler_standardRegister
--- PASS: TestAuthnHandler_standardRegister (0.00s)
=== RUN   TestAuthnHandler_startRegistration
--- PASS: TestAuthnHandler_startRegistration (0.00s)
=== RUN   TestAuthnHandler_startLogin
--- PASS: TestAuthnHandler_startLogin (0.00s)
=== RUN   TestCRUDHandler_GetPassword
--- PASS: TestCRUDHandler_GetPassword (0.00s)
=== RUN   TestCRUDHandler_GetPasswords
--- PASS: TestCRUDHandler_GetPasswords (0.00s)
=== RUN   TestCRUDHandler_CreatePassword
--- PASS: TestCRUDHandler_CreatePassword (0.00s)
=== RUN   TestCRUDHandler_RemovePassword
--- PASS: TestCRUDHandler_RemovePassword (0.00s)
=== RUN   TestCRUDHandler_RemoveUser
--- PASS: TestCRUDHandler_RemoveUser (0.00s)
=== RUN   TestCRUDHandler_UpdateUser
--- PASS: TestCRUDHandler_UpdateUser (0.00s)
=== RUN   TestCRUDHandler_GetUser
--- PASS: TestCRUDHandler_GetUser (0.00s)
PASS
coverage: 42.2% of statements
ok      github.com/keycloud/keycloud/server     0.352s
```


cucumber-keycloud-tests [C:\Users\Lukas\Documents\git_sources\keycloud\cucumber-tests] - ...\src\test\java\dev\zeekay\keycloud\GlobalHooks.java [cucumber-keycloud-tests] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help Snippets
RunCucumberTest
Run 'RunCucumberTest' (Umschalt+F10)
RunCucumberTest.java
GlobalHooks.java
DashboardTests.java
No IDEA annotations attached to the JDK 1.8 (C:\Program Files\Java\jdk1.8.0_171), some issues will not be found
Attach annotations
package dev.zeekay.keycloud;
import ...
public class GlobalHooks {
private static boolean dunit = false;
private static Thread server;
private static Process process;
@Before
public void beforeAll() {
if(!dunit) {
Runtime.getRuntime().addShutdownHook(new Thread(() -> {
process.destroy();
server.stop();
}));
server = new Thread(() -> {
try {
process = Runtime.getRuntime().exec(command: "./../server/server.exe");
StringBuilder output = new StringBuilder();
BufferedReader reader = new BufferedReader(
new InputStreamReader(process.getInputStream()));
String line;
while ((line = reader.readLine()) != null) {
output.append(line + "\n");
}
} catch (IOException e) {
e.printStackTrace();
}});
server.start();
dunit = true;
}
}
GlobalHooks
Project
cucumber-tests [cucumber-keycloud-tests]
.idea
.mvn
src
test
java
dev
zeekay
keycloud
DashboardTests
GlobalHooks
RunCucumberTest
resources
target
cucumber-keycloud-tests.iml
mvnw
pom.xml
External Libraries
Scratches and Consoles
Run: RunCucumberTest
Tests passed: 4 of 4 tests – 53 s 224 ms
RunCucumberTest (dev.zeekay.keycloud) 53 s 224 ms
Dashboard 53 s 224 ms
Register a new Account in KeyCloud 12 s 94 ms
Add a new password to my list 14 s 16 ms
Remove a password from my list 13 s 513 ms
Get password 13 s 601 ms
"C:\Program Files\Java\jdk1.8.0_171\bin\java.exe" ...
@WithoutPlugin
Feature: Dashboard
Scenario Outline: Register a new Account in KeyCloud # dev/zeekay/keycloud/dashboard.feature:4
Given I am on the landing page
When I type in <user> as my username and click register
Then I will be on the overview page of a new created Account
Examples:
@WithoutPlugin
Scenario Outline: Register a new Account in KeyCloud # dev/zeekay/keycloud/dashboard.feature:10
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
9: Version Control
Terminal
4: Run
6: TODO
Event Log
Run selected configuration
9:14 CRLF UTF-8 4 spaces Git: development-frontend