Learn IT Yourself

LERNZIELE SPIELERIESCH SELBST ERREICHEN

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Agenda

- **Business**
- **Quality**
- **Technical Ability**

Business

- VISION
- USE CASES
- PROJECT MANAGEMENT
- RUP
- TIME ESTIMATION

Our Vision

▶ **Blow up your motivation levels for reaching your goals!**

▶ **Turn mundane tasks such as studying into a game!**

Vision - Motivation

Competitive

- Points for completing tasks
- Highscore system
- Group statistics

Self-reflection

- Individual rating of (completed) tasks
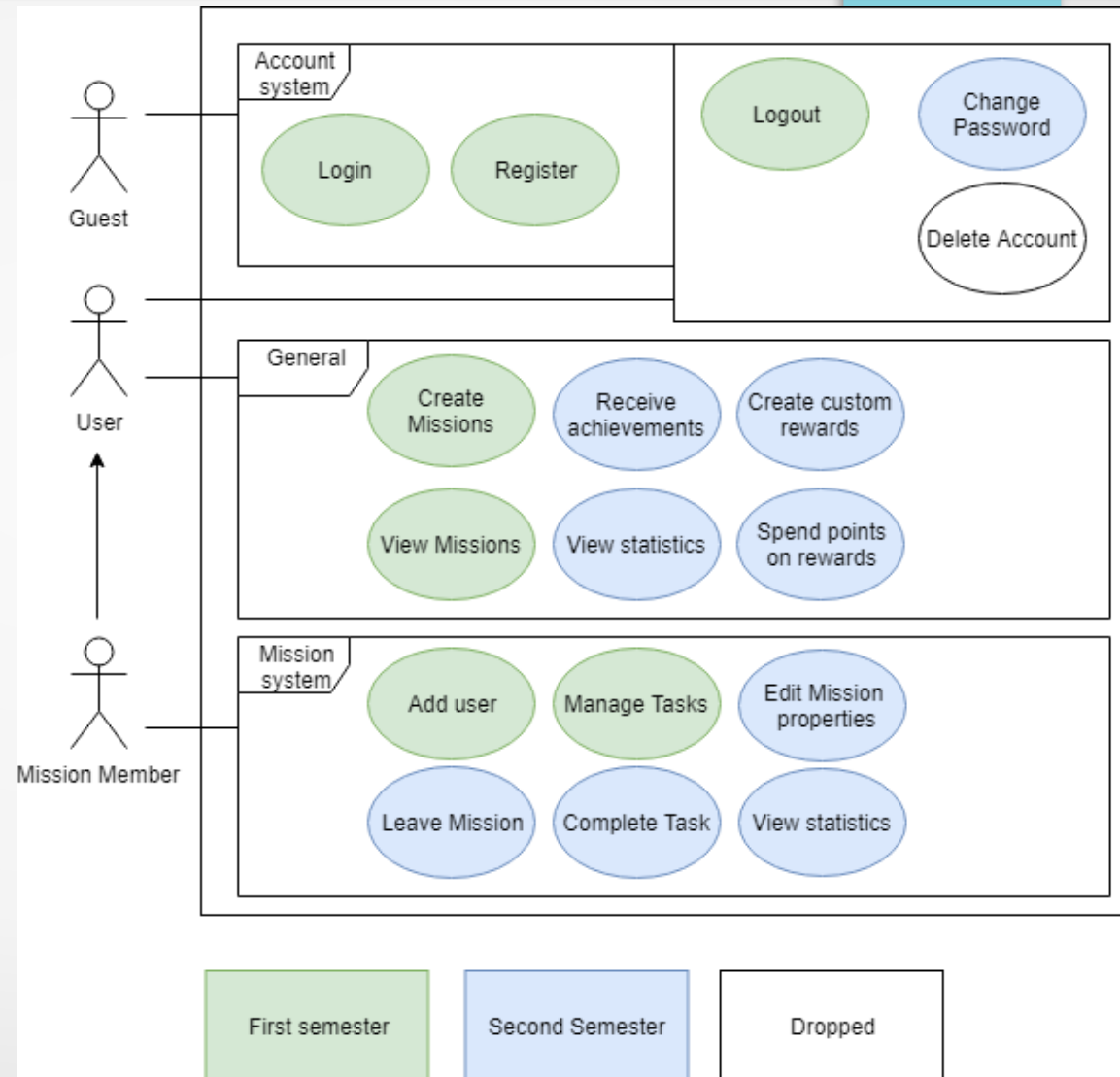- Reward system outside groups
- Spend points on personal rewards

Scope – Usecases/ SRS

Important Use-Cases:
 * Create Mission
 * Manage Tasks
 * Rewards
 * Achievements
 * Statistics

Dropped
 * Delete Account

Project Management

- **SCRUMMING** with project management tool „YouTrack"
- Every week new sprint planning
- Gives an overview of:
  - Spent time
  - Tasks ToDo/ in Progress/ Done
  - Work history

Youtrack

Open	○ 2h	‹ In Progress	⏱ 2d1h40m	‹ To Verify	◔ 3h30m	‹ Done	● 1d

▾ **Uncategorized Cards**   14 cards ◑

LEARNIT-148 ● Normal   Task   ● Construction

[Doc] Edit Class Diagram

`AS` `JH`   ○ 2h

LEARNIT-140 ● Normal   Task   ● Construction

Do User Tests

`JA` `AS` +2   ◔ 1h40m

LEARNIT-189 ● Normal   Task   ● Construction

Final Presentation

`JA` `AS` +2   ○ 4h

LEARNIT-157 ● Normal   Task   ● Construction

[Doc] Finish Testplan

`JH`   ◔ 2h

LEARNIT-176 ● Show-stopper   Task   ● Constr...

[Back] edit completeTask.php

`RO`   ◔ 1h

LEARNIT-190 ● Normal   Task   ● Construction

[Back][Fix] Fix deleteReward and CreateMission

`RO`   ◑ 2h

LEARNIT-195 ● Normal   Task   ● Construction

[Front] Change Frontend to work with getAchievements

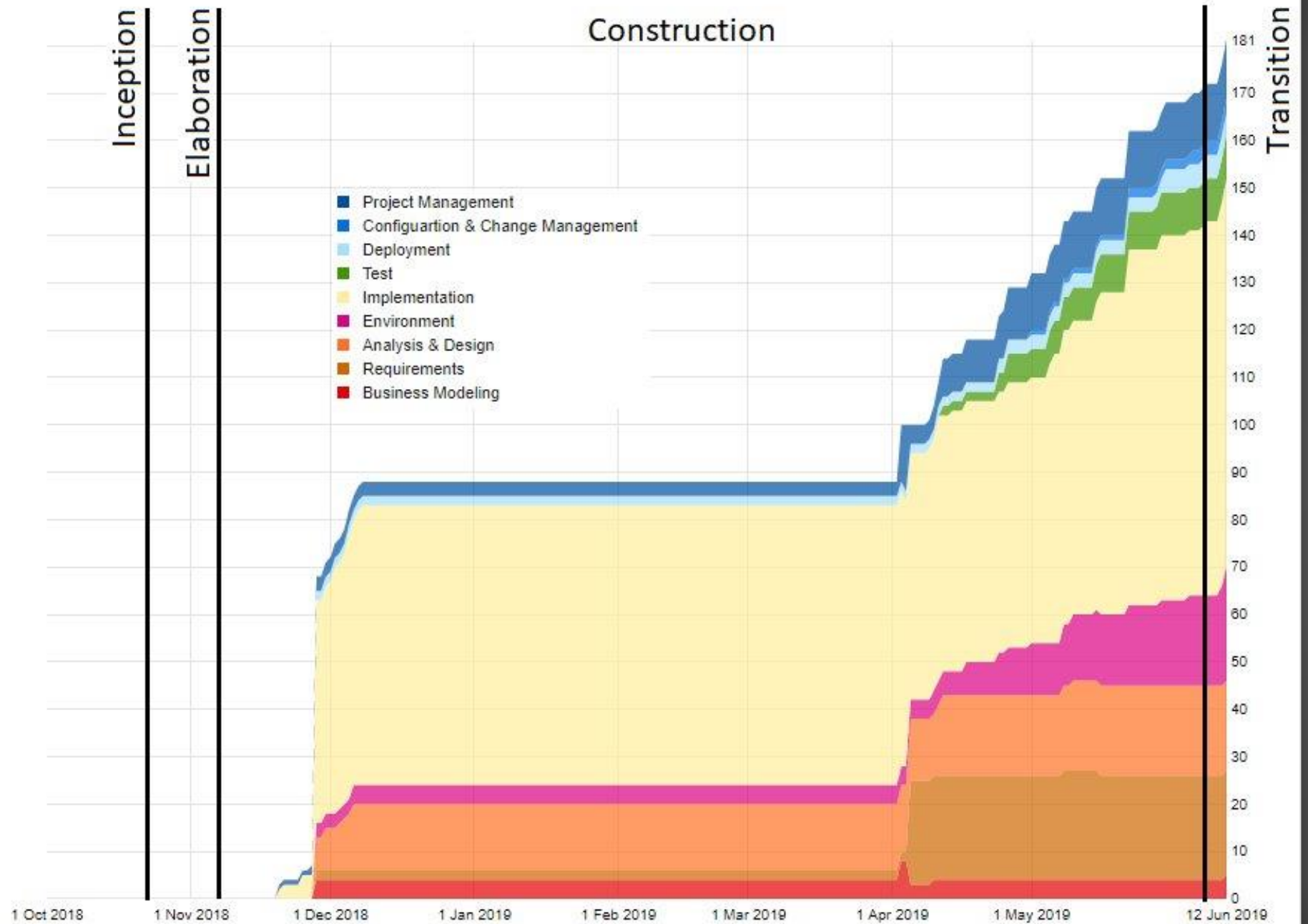`JH`   ◐ 30m

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LEARNIT-191 ● Normal   Task   ● Construction

Create Video

`JH`   ● 2h

LEARNIT-192 ● Normal   Task   ● Transition

Create the CI and Tech Stack blogpost

`RO`   ● 2h

LEARNIT-164 ● Show-stopper   Task   ● Constr...

[Back] Receive Achievements

`RO`   ● 4h

RUP

FP Time Estimation

$$y = 0.57354x - 2.67474$$
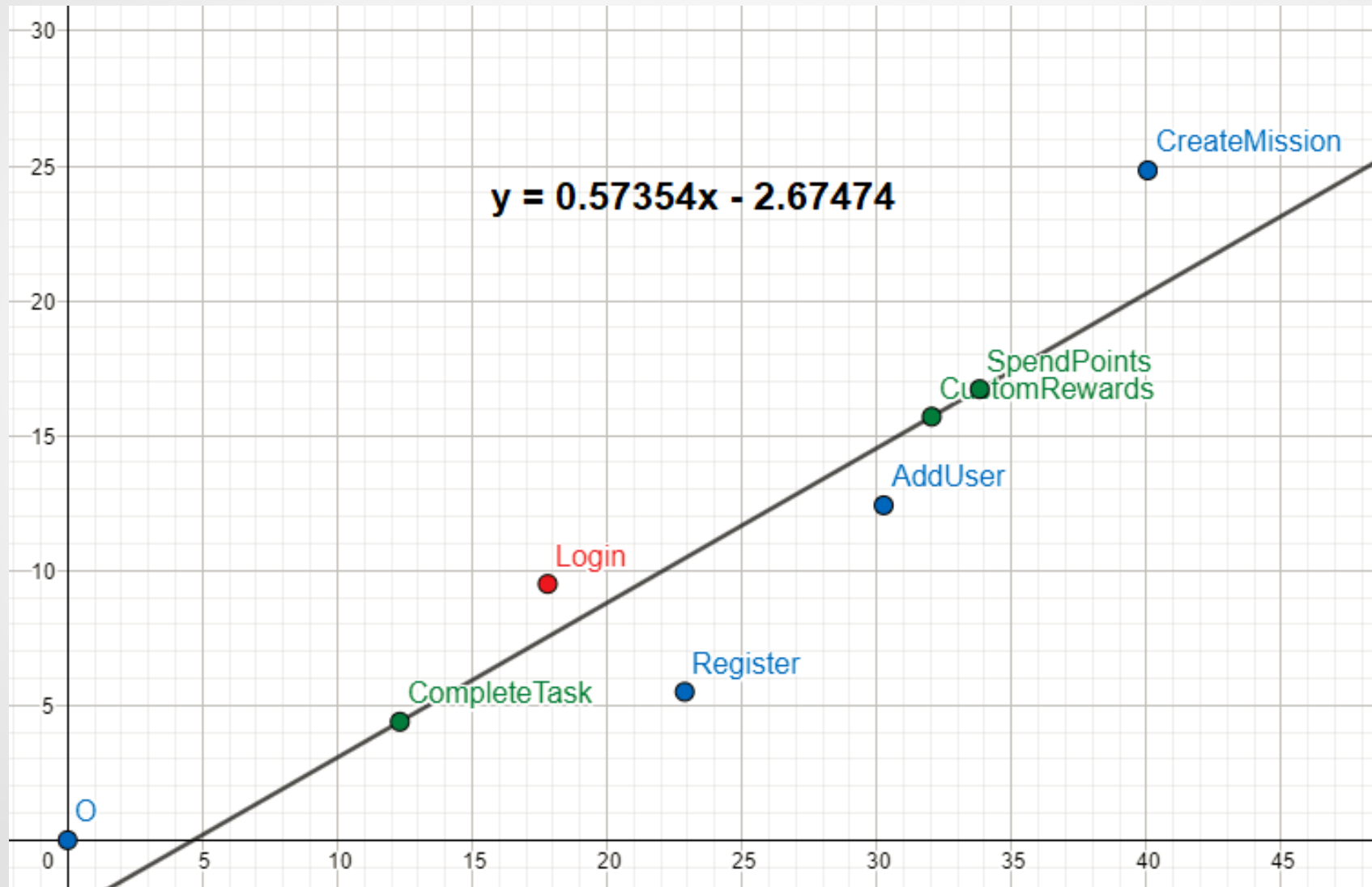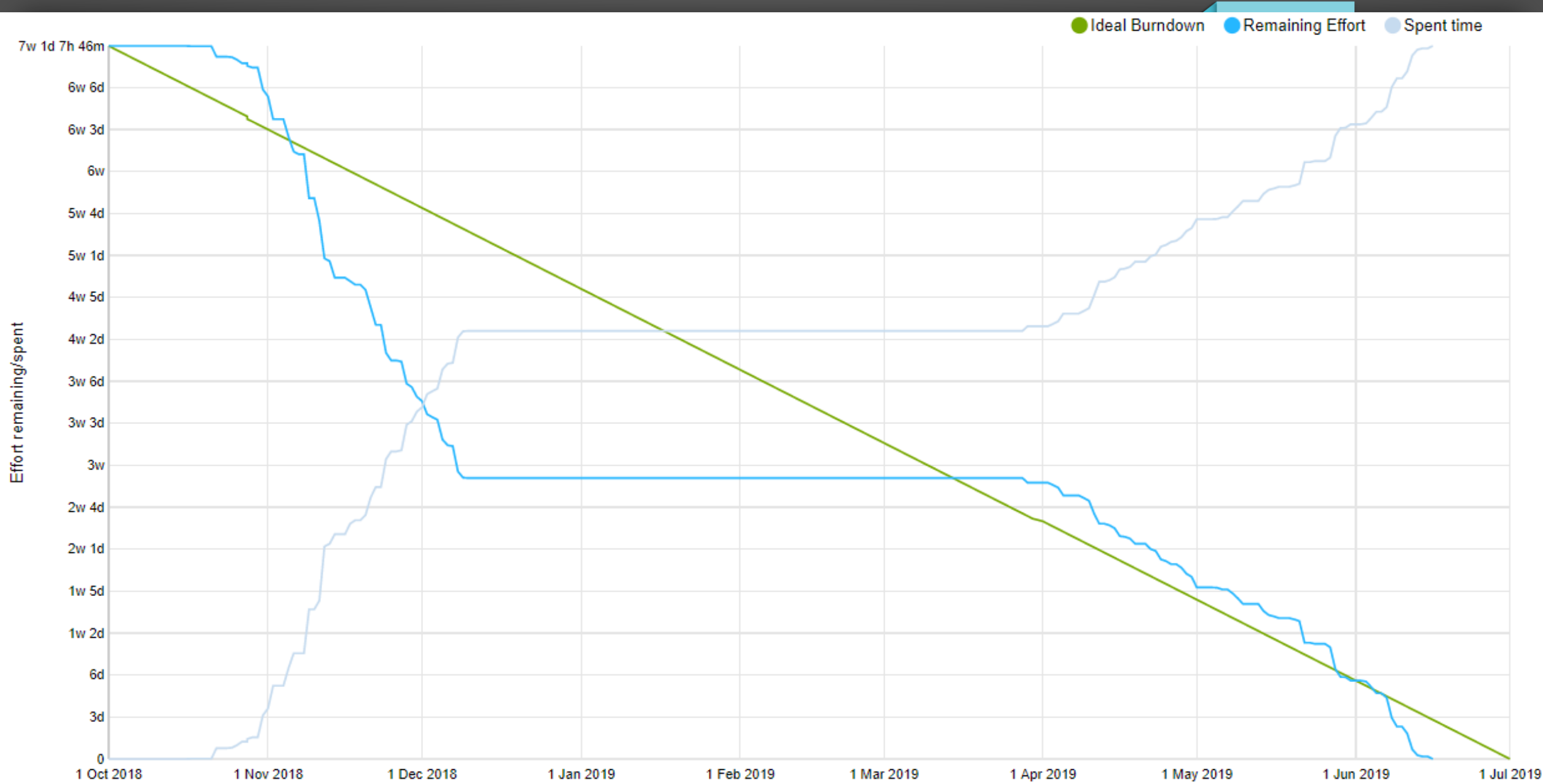
Quality

TESTING

AUTOMATION

RISK MANAGEMENT

ARCHITECTURE

PATTERNS

METRICS

Testing

Unit Testing

- Testing the functionality of individual functions

Functional Testing

- Testing a complete functionality of the application

User Testing

- Testing the usability

Continuous Integration

Development

Version Control

Continuous Integration

Trigger

Build and Test

Feedback

Risk Management

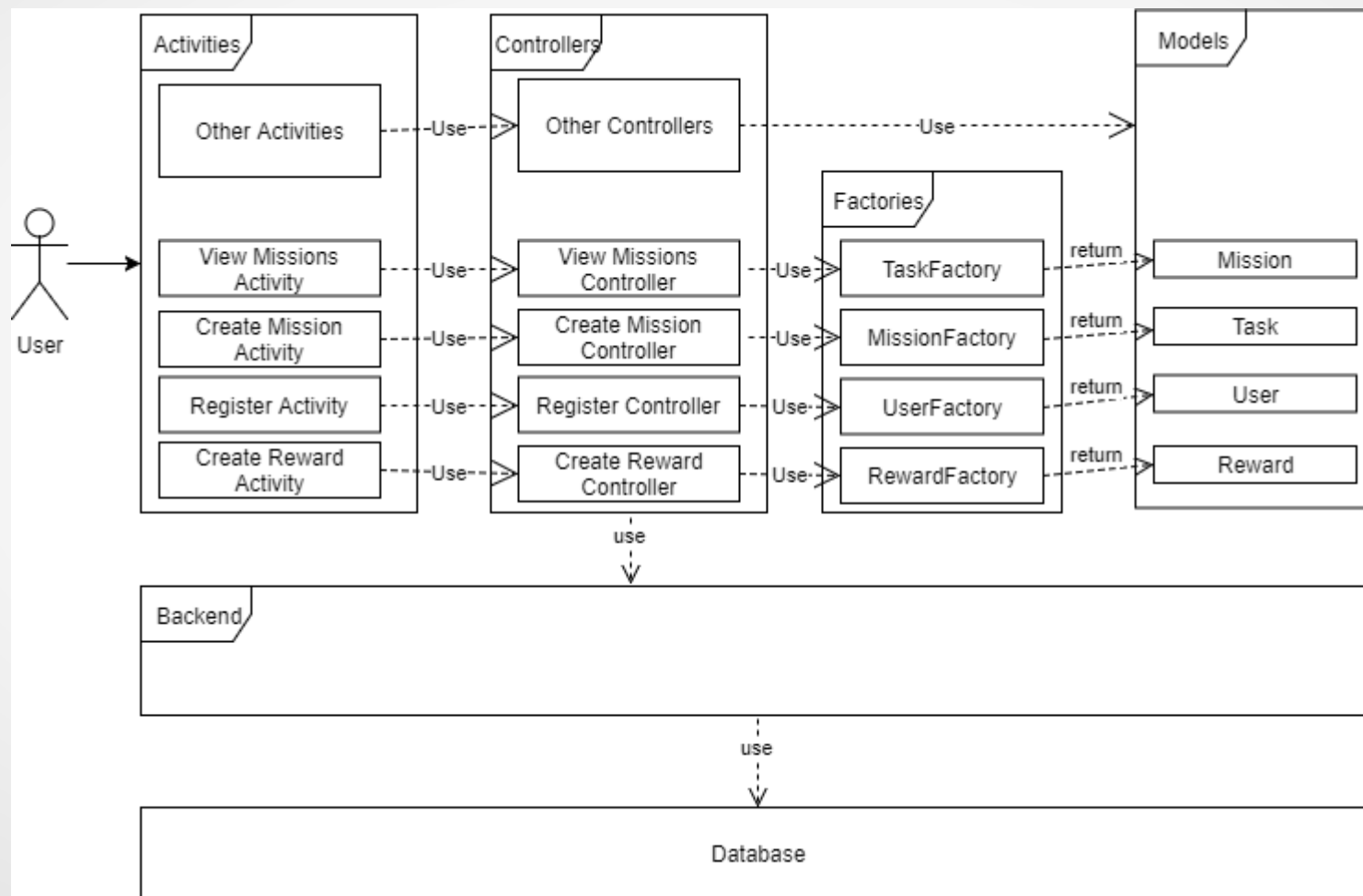| Risk Name	Risk Description	Risk Probability	Risk Impact	Risk Mitigation	Person in Charge	Risk Factor
Repository loss	Git Repository breaks or Github goes down	1%	10	Having local backups	Jonas	0.1
Server loss	Losing our Backend because of problems with our provider Contabo	3%	10	Backup of all the Code and Data (regularly)	Jannik and Mert	0.3
Hacker attacks	Sensible data like User Passwords are exploited (Data Loss) or Virus infection	5%	7	Implementing proper Security Measures	Everyone	0.35
Local Code loss	Losing local Code changes because of technical problems	20%	2	Frequent pushes to Git	Everyone	0.4
Member Loss	Losing a Team Member (temporarily/permamently) due to e.g. a medical condition thus falling out of schedule	1%	8	-	Everyone	0.8
Unsatisfying results	In the end the App does not fully represent the looks and features of what was initially planned	20%	9	Defining and implementing Use Cases correctly and prototyping frequently	Everyone	1.8
Unexpected Bugs	Code contains bugs which could e.g. crash the App or display wrong data in a productive scenario	30%	7	Proper and frequent testing	Everyone	2.3
Unexpected complexity of UC	UC is more complex and takes more time than expected	50%	6	Proper planning or cutting down on Features	Jonas	3
Bad Code	Bad Code makes understanding hard	50%	6	Refactoring	Everyone	3

Architecture
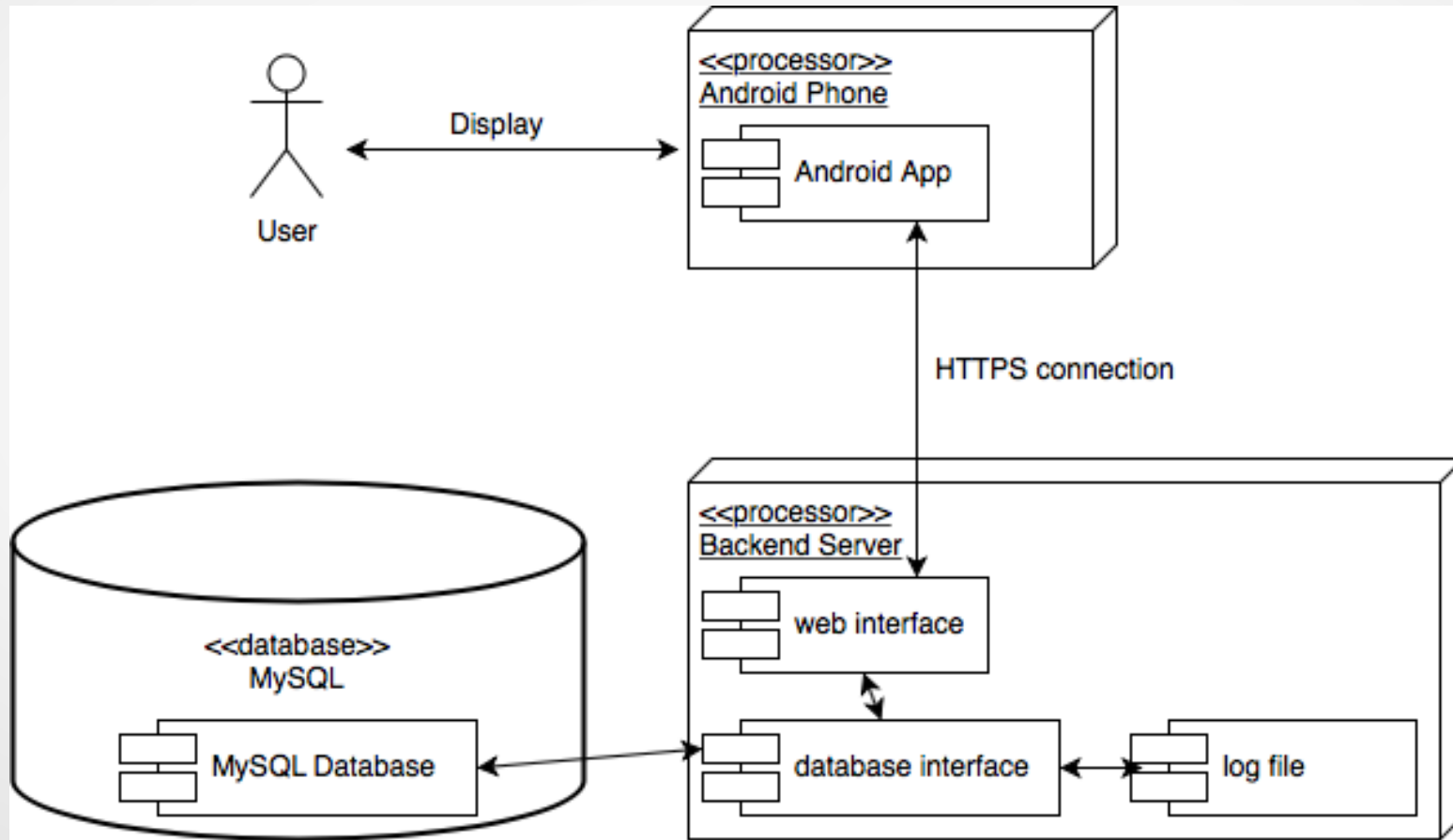
Architecture II
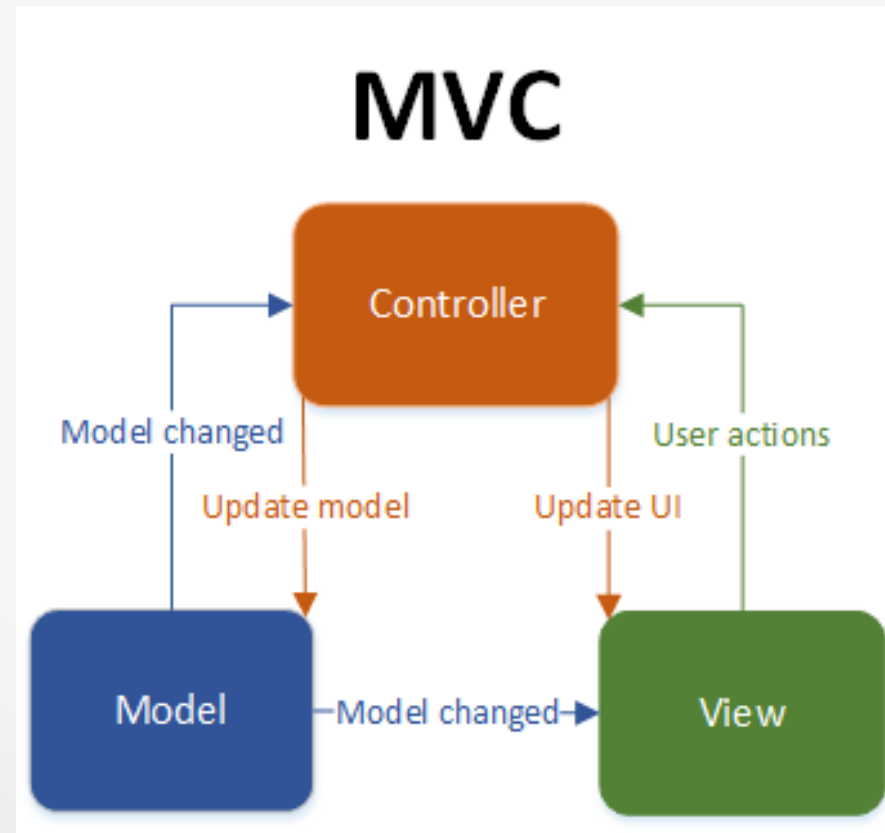
Architecture III
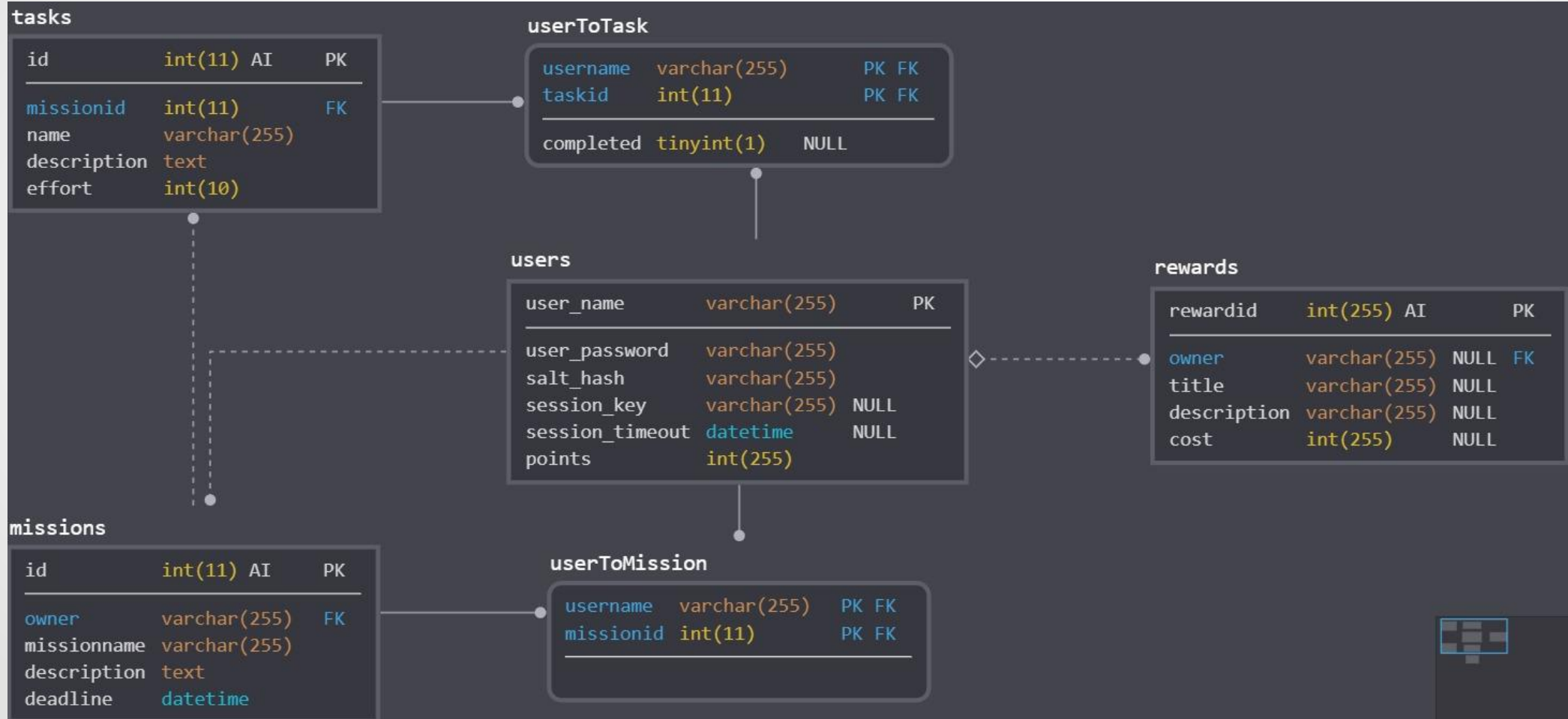
Design Patterns

- Factory Method Pattern
- Idea: Disguise the construction of a model with another class, the factory
- In our case: Static methods to create new model objects
- -> filled with data, then returned

Design Patterns II

Metrics

Metrics II

| class	OCavg	WMC
learnityourself.dhbw.learnityourself.utility.HTTPRequestHandler	3,50	7
learnityourself.dhbw.learnityourself.OptionsActivity	2,00	6
learnityourself.dhbw.learnityourself.controller.AuthorizedController	2,00	6
learnityourself.dhbw.learnityourself.RegisterActivity	2,00	6
learnityourself.dhbw.learnityourself.AddMissionMemberCreateMissionActivity	1,93	29
learnityourself.dhbw.learnityourself.CreateCustomRewardActivity	1,70	17
learnityourself.dhbw.learnityourself.CreateMissionActivity	1,69	49
learnityourself.dhbw.learnityourself.controller.OptionsController	1,67	5
learnityourself.dhbw.learnityourself.controller.LoginController	1,50	6
learnityourself.dhbw.learnityourself.controller.RegisterController	1,50	3
learnityourself.dhbw.learnityourself.AddMissionMemberActivity	1,44	13
learnityourself.dhbw.learnityourself.model.AddUserAdapter	1,43	10
learnityourself.dhbw.learnityourself.model.TaskAdapter	1,40	7
learnityourself.dhbw.learnityourself.ManageTaskActivity	1,36	15
learnityourself.dhbw.learnityourself.model.RewardAdapter	1,36	15
learnityourself.dhbw.learnityourself.ViewTaskActivity	1,25	10
learnityourself.dhbw.learnityourself.controller.MainController	1,23	16
learnityourself.dhbw.learnityourself.controller.ViewRewardsController	1,22	11
learnityourself.dhbw.learnityourself.model.UserAdapter	1,20	6
learnityourself.dhbw.learnityourself.model.MissionAdapter	1,20	6
learnityourself.dhbw.learnityourself.MainActivity	1,20	12
learnityourself.dhbw.learnityourself.ViewRewardsActivity	1,20	6
learnityourself.dhbw.learnityourself.model.MissionMemberAdapter	1,20	6
learnityourself.dhbw.learnityourself.ViewMissionsActivity	1,17	7
learnityourself.dhbw.learnityourself.ViewMissionActivity	1,17	14

class	OCavg	WMC
learnityourself.dhbw.learnityourself.utility.HTTPRequestHandler	2,25	9
learnityourself.dhbw.learnityourself.OptionsActivity	2,00	6

Technology

CLASS DIAGRAM

TECHNICAL ABILITY

LIVE DEMO
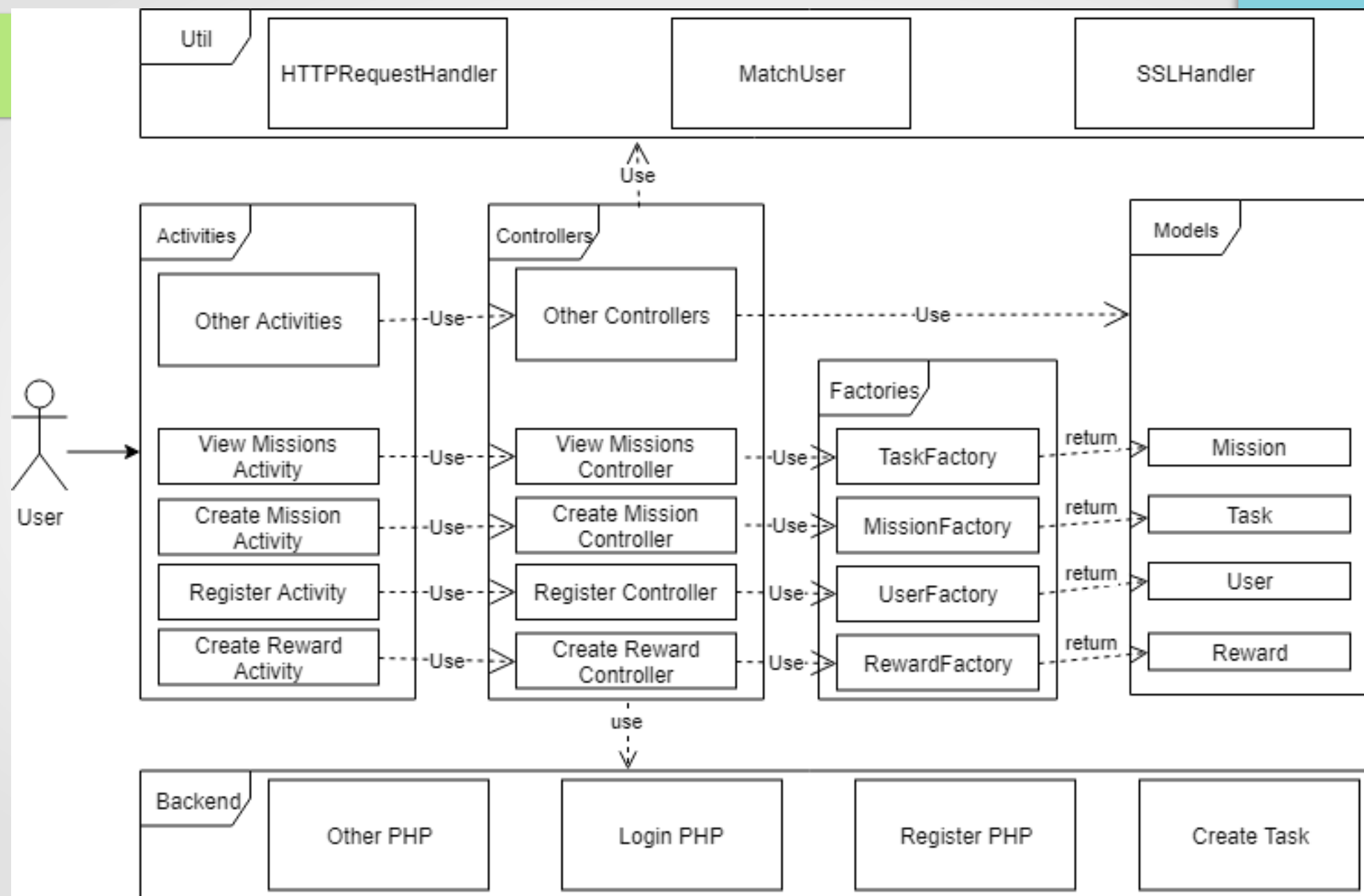
Technical Ability

- Account
- CRUD Missions
- CRUD Tasks
- CRUD Rewards
- Statistics
- Achievements

Demo