



# Software Engineering II

## Introduction and Organization

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Software Engineering II  
WS 2018/19

Prof. Plattner, Dr. Uflacker  
Enterprise Platform and Integration Concepts Group

# Agenda

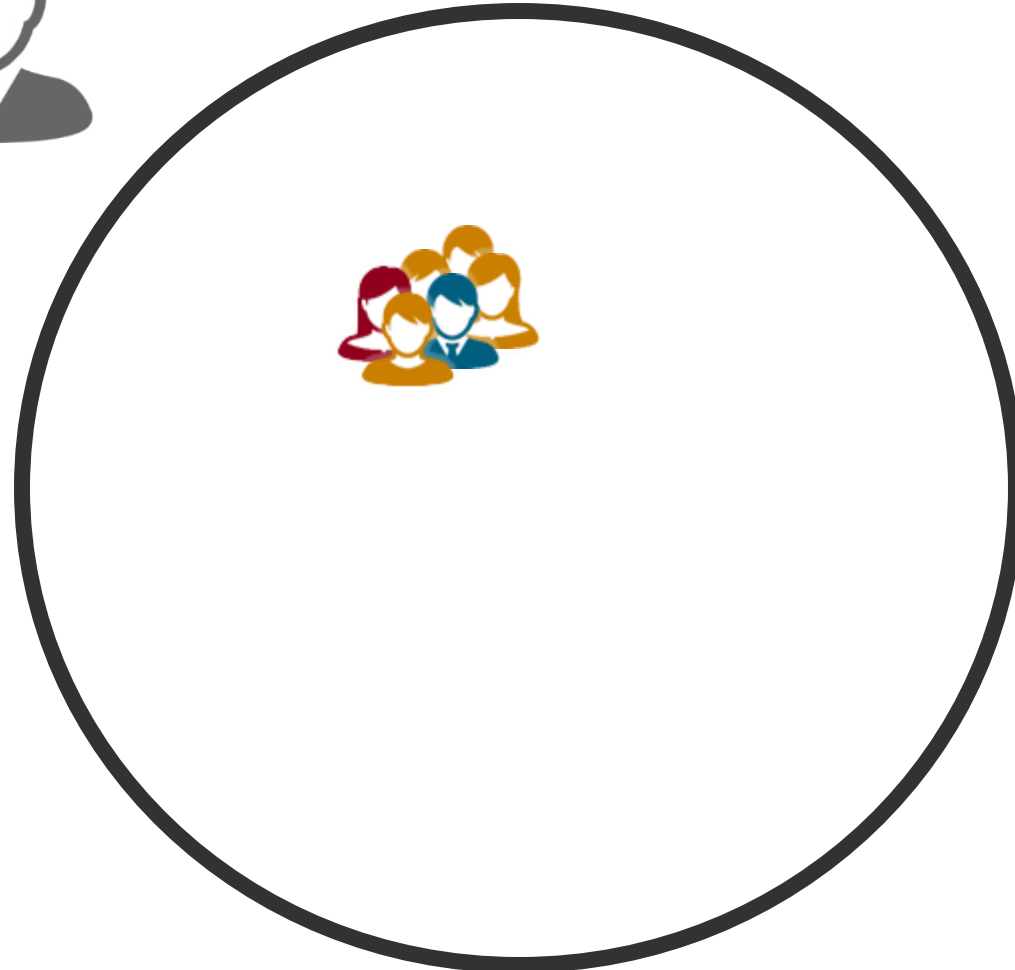


1. High-level Overview of SWT2
2. Organization
3. Project
4. Basic IT Infrastructure
5. Lectures
6. Literature

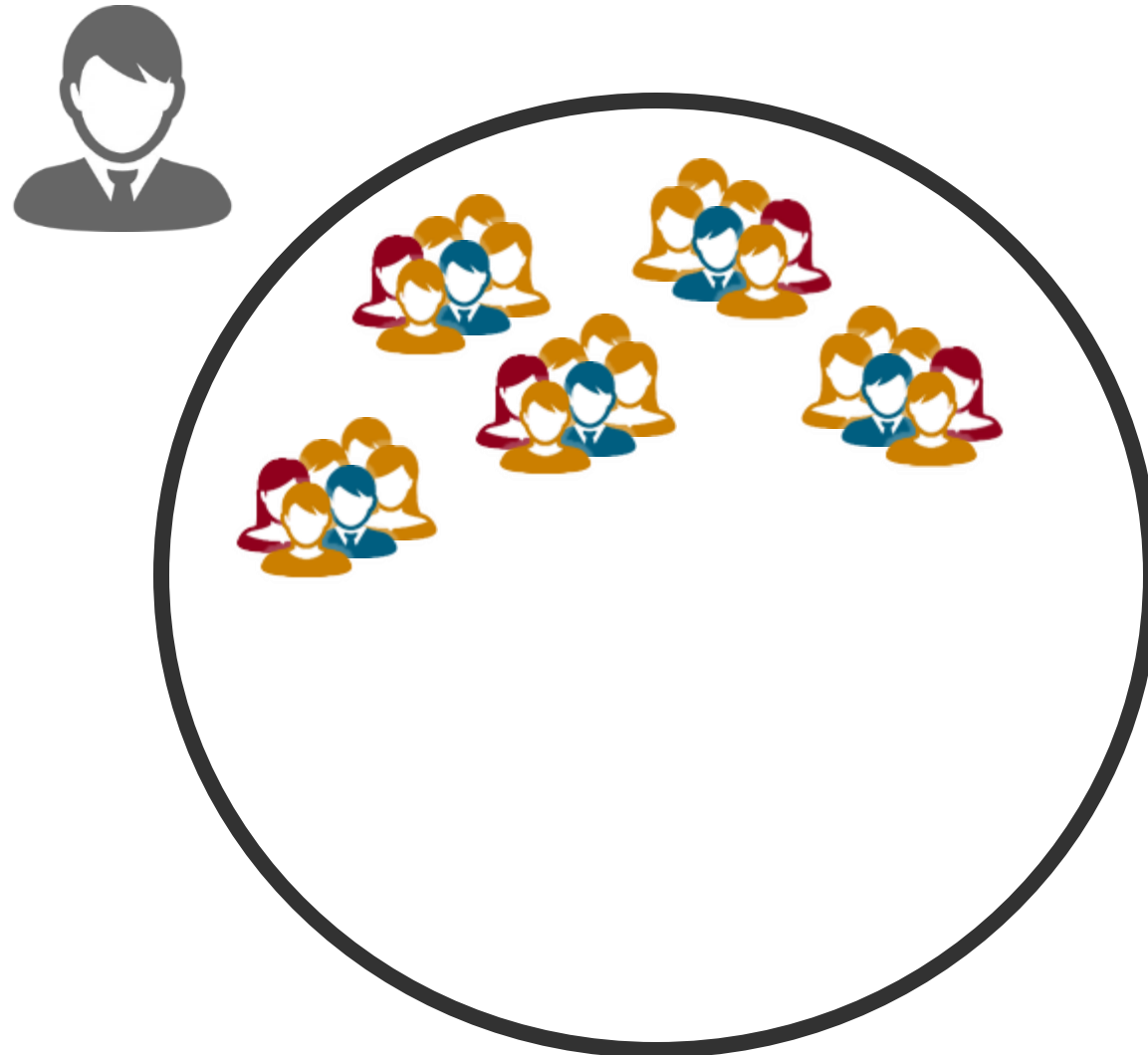
# High-level Overview of SWT II



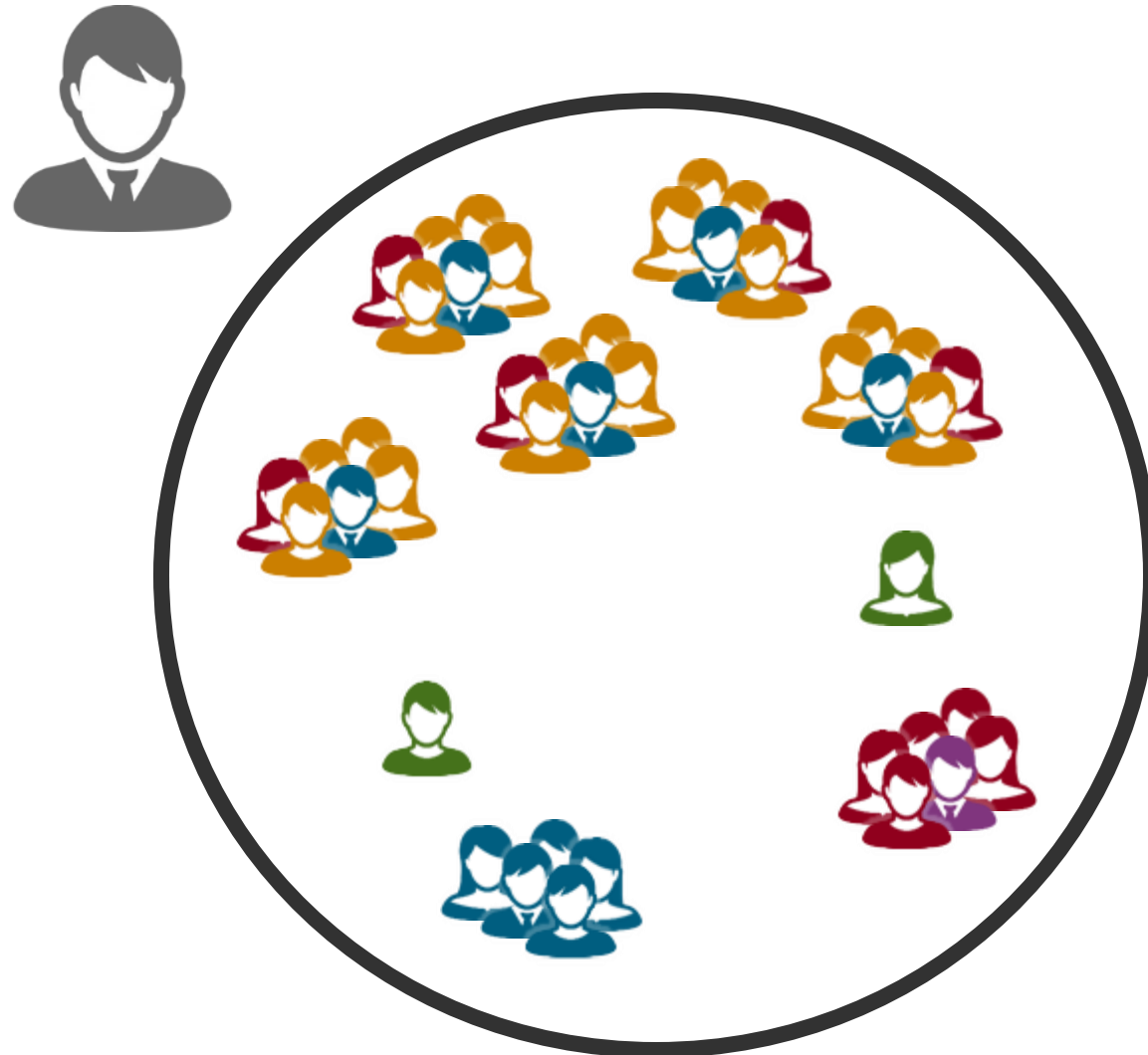
# High-level Overview of SWT II



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# Organization



## Prerequisite

- Undergraduate program
- Softwaretechnik I

## Class

- 4 SWS (≈8h work per week including lectures)
  - “canceled” lectures allow for more group work time – you will need it ;-)
- 6 ECTS credit points (graded)

## Modules

- Business Process & Enterprise Technologies
- Operating Systems & Information Systems Technology
- Software Architecture & Modeling Technology

# Organization



## Important dates

- Enrollment until October 26, 2018
- Preparation exercise (link see website)
  - Deadline Nov 9, 15:00 pm CET
- Project starts November 09, 2018

## Lectures

- Friday, 09:15 – 10:45, HS3
- Friday, 11:00 – 12:30, HS3

## Web

- <https://hpi.de/plattner/teaching/winter-term-201819/softwaretechnik-ii.html>



# Organization



## Responsible

- Dr. Matthias Uflacker ([matthias.uflacker@hpi.de](mailto:matthias.uflacker@hpi.de))

## Teaching Team

- Christoph Matthies ([cristoph.matthies@hpi.de](mailto:cristoph.matthies@hpi.de))
- Keven Richly ([keven.richly@hpi.de](mailto:keven.richly@hpi.de))
- Ralf Teusner ([ralf.teusner@hpi.de](mailto:ralf.teusner@hpi.de))



## Tutors

- Arne Boockmeyer ([arne.boockmeyer@student.hpi.de](mailto:arne.boockmeyer@student.hpi.de))
- Jascha Beste ([jascha.beste@student.hpi.de](mailto:jascha.beste@student.hpi.de))

- Completion of the **introductory Ruby on Rails exercise** is mandatory
  - Product Owners are exempt
  
- 30%: **Oral exam** (written exam if #students >> 40)
- 45%: **Usage of presented methods and concepts**
  - Main focus of the course
  - Usage and application of Scrum and agile practices & tools
  - Effective team work and collaboration
- 25%: **Software development results (team mark)**
  
- For grading, POs are considered one team

# Learning Targets



**multi-team-setups**  
**Git**  
**Scrum**  
**BDD**  
**requirements-prioritization**  
**Deployment**  
**time-management**  
**Rails**  
**TDD**

# Working in Teams



Participants form **teams of 5-7** participants

## Each team consists of

- 1 Product Owner (PO)
- ½ Scrum Master (SM)
- Several team members

## Questions

- Who is not in the 5<sup>th</sup> semester?
- Who is not an HPI student?

# Working in Teams



- Mail your team choice to [swt2\\_18\\_orga@lists.myhpi.de](mailto:swt2_18_orga@lists.myhpi.de)
  - Until **Sunday, October 28**
  - Who will be PO and SM?
  - Three suggestions for weekly meeting
  
- POs: mail us suggestions for **first customer meeting**
  - Between October 29 and November 2

# Teaching Team Roles



The teaching team provides

- **Customer** (Keven Richly)

- Represents the clients of the developed software
- Has ideas and requirements that need to be fulfilled

- **Chief Product Owner** (Ralf Teusner)

- Main contact point for team POs
- Helps in dealing with customer requirements & process

- **Tutors** (Arne, Jascha) as Scrum consultants

- Present during meetings
- Open for questions, advice & ideas
- Coordinate with them!

# Content of the Project



## Software engineering assignment

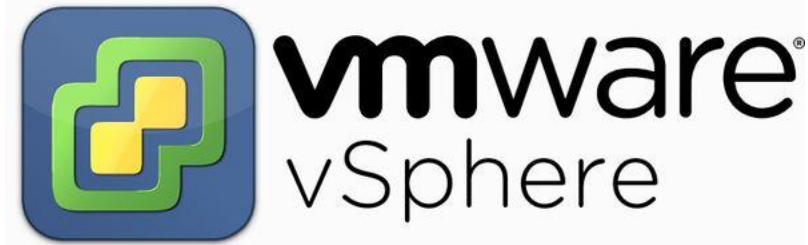
- Programming framework: *Ruby on Rails 5 (who has used that?)*
- Minimal core is provided (see the website)
- Results will be open source on GitHub (*who has used that?*)

## Focus

- Functionality
- Avoiding “patchwork” (UI, Workflows, Data)
- Maintainability of the Code Base (Tests, Quality, etc.)

**So what's the topic?**

# Project: VM Administration



**RackTables** Hello, RackTables Administrator. This is RackTables 0.17.0. Click [here](#) to logout.

MyCompanyName: Main page: Objects Search:

[Browse](#) [Add more](#)

### Objects (12)

Common name	Visible label	Asset tag	Barcode	Row/Rack
<a href="#">london router</a> London, testing	bbrtr1	net247		<a href="#">London/L02</a>
<a href="#">London server 1</a> London	lserver01	srv500		<a href="#">London/L01</a>
<a href="#">London server 2</a> London	lserver02	srv501		<a href="#">London/L01</a>
<a href="#">London server 3</a> London	lserver03	srv502		<a href="#">London/L01</a>
<a href="#">London server 4</a> London	lserver04	srv503		<a href="#">London/L01</a>
<a href="#">London server 5</a> London	lserver05	srv504		<a href="#">London/L01</a>
<a href="#">London server 6</a> London	lserver06	srv505		<a href="#">London/L03</a>
<a href="#">London server 7</a> London	lserver07	srv506		<a href="#">London/L03</a>
<a href="#">tokyo router</a> 東京, testing	bbrtr4			<a href="#">Tokyo/T01</a>
<a href="#">Tokyo server 1</a> 東京	tserver01	srv654		<a href="#">Tokyo/T01</a>
<a href="#">Tokyo server 2</a> 東京	tserver02	srv848		<a href="#">Tokyo/T01</a>
<a href="#">Tokyo server 3</a> 東京	tserver03	srv139		<a href="#">Tokyo/T01</a>

### filter

and  or

- Geo
  - east
    - far east
    - 東京
    - Москва
  - west
    - far west
    - New-York
  - London
- load balancer
- production
- testing

(no predicates to show)



# IT Infrastructure – Open Source!



## Infrastructure

**HuBoard**  
**GoogleCalendar**

**Github**  
**Mailing-Lists**  
**Gemnasium**  
**CodeSchool**  
**Travis-CI**  
**Heroku**  
**CodeClimate**

# Communication Channels



## Mailing List

- [swt2\\_18@lists.myhpi.de](mailto:swt2_18@lists.myhpi.de)
- Sign-up!
- Important announcements

## Calendar

- <https://www.google.com/calendar/embed?src=hpi.swt2%40gmail.com&ctz=Europe/Berlin&mode=AGENDA>
- For all formal meetings

## Slack

- <https://swt2-2018.slack.com>
- Sign-up!
- Team discussions
- Strongly recommended as a single point of communication

**All links can be found on the web site.**

## Lecture supports project

- Rails Intro
- Project Intro
- Scrum and multi-team settings
- Project infrastructure in detail
- BDD & TDD (in Rails)
- Code Review, Process Improvement
- Deployment
- Guest Lectures (Industry)

# Rails Exercise



## To get started in Rails...

- 3 weeks for a tutorial exercise

hpi-sw2-exercise / rails-exercise-18-rteusner

Unwatch 5 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

rails-exercise-18-rteusner created by GitHub Classroom Edit

[Manage topics](#)

18 commits 1 branch 0 releases 3 contributors MIT

Branch: master New pull request Create new file Upload files Find file Clone or download

**chrisma** Update README Latest commit 83cc54e 3 hours ago

# SWT2 Schedule



## Preliminary Schedule

- **November 9: Project Kick-Off**
- Nov 12 – Nov 16: Begin of Sprint 1
- Nov 26 – Nov 30: Begin of Sprint 2
- Dec 10 – Dec 14: Begin of Sprint 3
- **December 14: Intermediate Presentation**
- Jan 14 – Jan 18: Begin of Sprint 4
- Jan 28 – Feb 1: Begin of Kanban Iteration
- **February 8: Final Presentation**

## No schedule survives contact with reality

- **This is a project course**
  - Actually writing a software is vital
  - Real-world scenario will bring real-world issues
- Schedule can adapt
  - Also according to your suggestions

# Schedule

Exercise

Kick-Off

Sprint 1 (2 weeks)

Sprint 2 (2 weeks)

Intermediate Presentation

Sprint 3 (3 weeks)

Sprint 4 (2 weeks)

Kanban Week

Final Presentation



Oct	42	15	16	17	18	19	Intro / RoR
	43	22	23	24	25	26	Scrum / Testing / Lego
	44	29	30	31	1	2	
Nov	45	5	6	7	8	9	Kick-Off / Git
	46	12	13	14	15	16	
	47	19	20	21	22	23	
Dec	48	26	27	28	29	30	Reviews / Deployment
	49	3	4	5	6	7	
	50	10	11	12	13	14	Interm. Presentation / Scrum Tips / Guest Lecture
Christmas Break							
Jan	1		1	2	3	4	
	2		7	8	9	10	11
	3		14	15	16	17	18
Feb	4		21	22	23	24	25
	5		28	29	30	31	1
	6		4	5	6	7	8

## General literature

- Ruby, S.; Thomas, D.; Hansson D. H.: Agile Web Development with Rails 4, 2013 (ebook)
- Swicegood, T.: Pragmatic Guide to Git (P3.0), 2012 (ebook)
- Rappin, N.: Rails Test Prescriptions, 2012
- Rasmusson, J.: The Agile Samurai (P4.0), 2012 (ebook)
- Pichler, R.: Agile Product Management with Scrum, 2010
- Cohn, M.: Succeeding with Agile, 2012
- Larman, C.; Vodde, B.: Scaling Lean & Agile Development, 2009
- Ludewig, J.; Lichter, H.: Software Engineering, 2006
- Sommerville, I.: Software Engineering, 2004

Ebooks will be made available for selected books

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Questions?

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