



Software Engineering II

Introduction and Organization

Ralf Teusner
ralf.teusner@hpi.de

Software Engineering II
WS 2018/19

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

Agenda

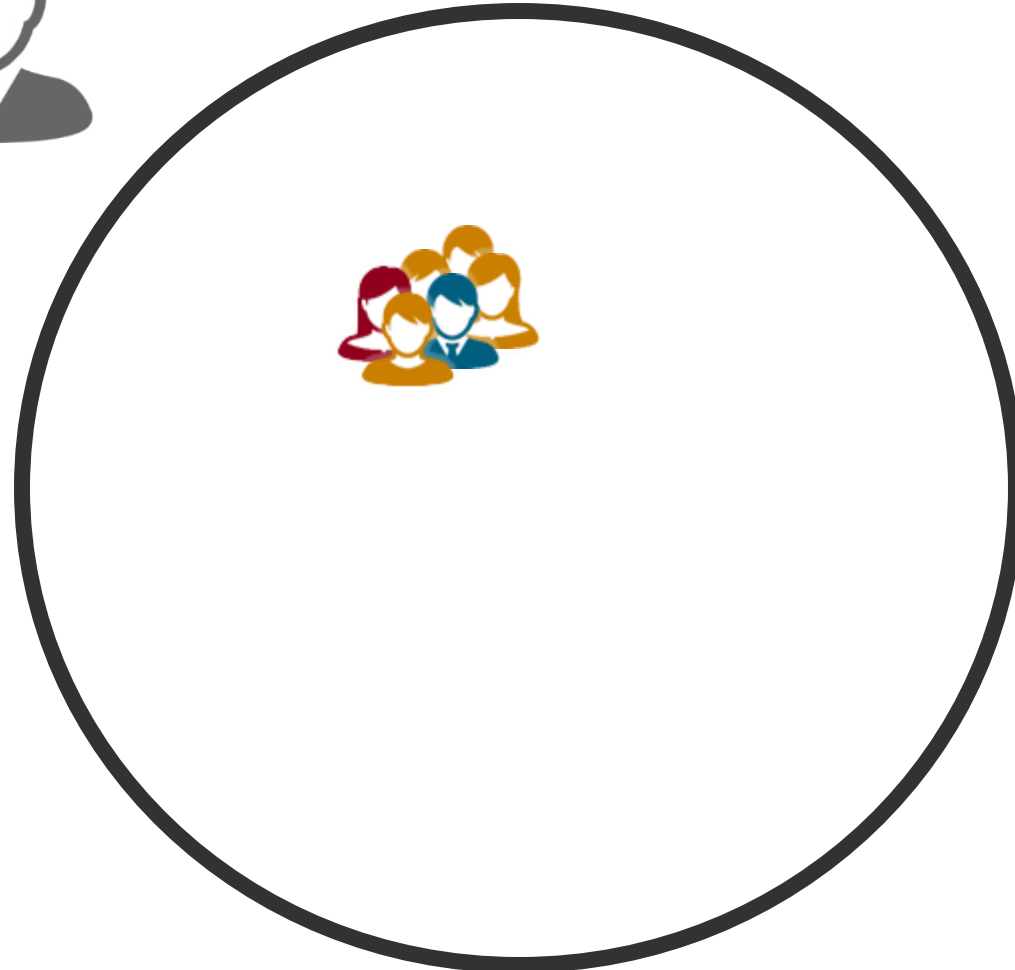


1. High-level Overview of SWT2
2. Organization
3. Project
4. Basic IT Infrastructure
5. Lectures
6. Literature

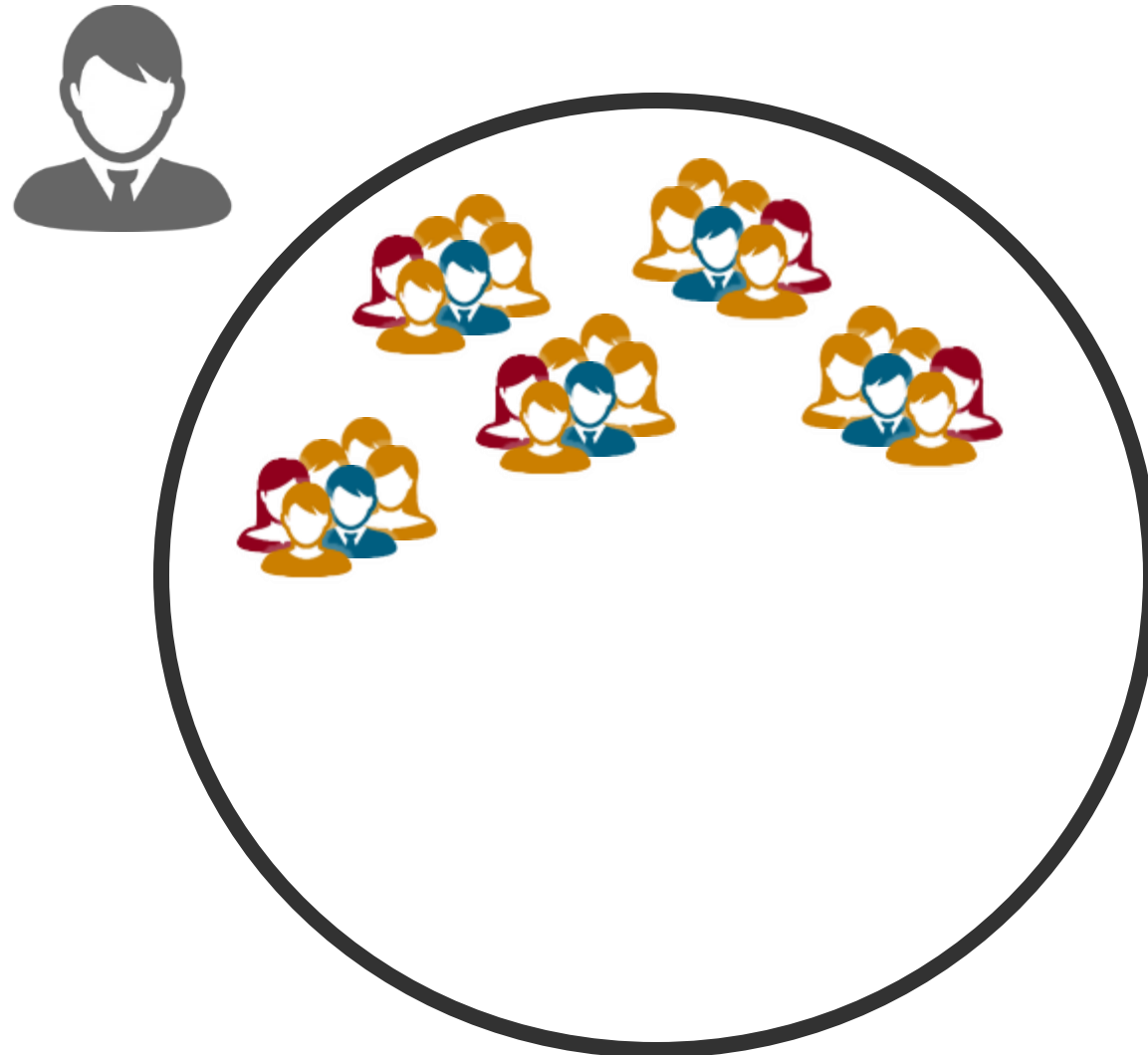
High-level Overview of SWT II



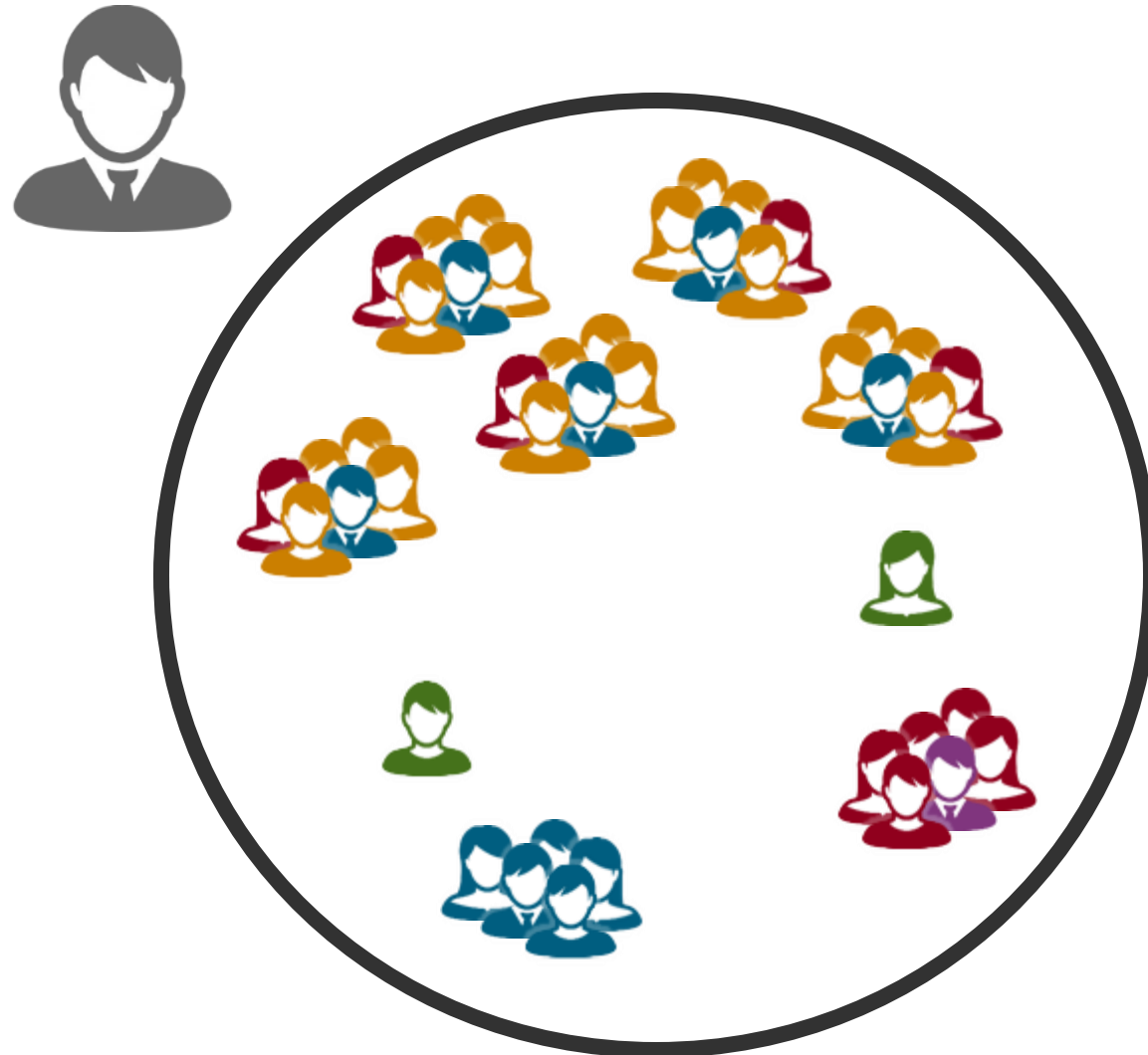
High-level Overview of SWT II



High-level Overview of SWT II



High-level Overview of SWT II



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)

Teaching Team

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



Tutors

- Arne Boockmeyer (arne.boockmeyer@student.hpi.de)
- Jascha Beste (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 5th semester?
- Who is not an HPI student?

Working in Teams



- Mail your team choice to 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

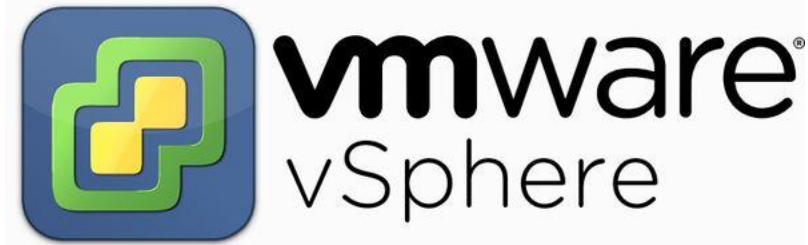
- Programming framework: *Ruby on Rails 5 (who has used that?)*
- Minimal core is provided (see the website)
- Results will be open source on GitHub (*who has used that?*)

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
london router London, testing	bbrtr1	net247		London/L02
London server 1 London	lserver01	srv500		London/L01
London server 2 London	lserver02	srv501		London/L01
London server 3 London	lserver03	srv502		London/L01
London server 4 London	lserver04	srv503		London/L01
London server 5 London	lserver05	srv504		London/L01
London server 6 London	lserver06	srv505		London/L03
London server 7 London	lserver07	srv506		London/L03
tokyo router 東京, testing	bbrtr4			Tokyo/T01
Tokyo server 1 東京	tserver01	srv654		Tokyo/T01
Tokyo server 2 東京	tserver02	srv848		Tokyo/T01
Tokyo server 3 東京	tserver03	srv139		Tokyo/T01

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

CodeSchool
Travis-CI
Heroku
CodeClimate
Github
Mailing-Lists
Gemnasium

Communication Channels



Mailing List

- 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	Guest Lecture
	4		21	22	23	24	25	
Feb	5		28	29	30	31	1	
	6		4	5	6	7	8	Final Presentation

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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