

TDDC88/725G64

Project Introduction

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Dept. of Computer and Information Science

Agenda:

Presence check

How to run the project

Personnel

Reports

Grading

Meetings in near future

The customer

Presence check

No working device?
Send a mail to
kristian.sandahl@liu.se



<https://forms.office.com/e/NnGQJGX5B1>

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Real-world-like project in student companies

- Competing for contract with customer
 - Pre-study
 - Present at Toll-Gate meeting
- Develop prototype
 - In dialogue with the customer
- Final presentation in December at VSSE



Aim of the project

- Improve individual skills
 - Apply the theory of the course in practice
- Improve collaborative skills
 - Design, experience and improve process and value flows – from needs to realized customer value
 - Joint handling of risks and unexpected problems
 - Self-organizing at a non-trivial scale
- Gain a product perspective
 - Customer centricity
 - Prioritizations
 - Features versus quality
- You will feel like you're being thrown into the deep end. That's ok.
 - Here there are lifeguards watching...
 - ... unlike in the industry.

The company is responsible for assigning roles

- Role-assignment 2023-09-01 10:15-12:00
- Many roles are inherently part-time
 - Many of you will end up coding and testing in October-November
 - Internal education part of the project work
- Roles should be dynamically assigned
 - Change roles as company's needs change through the project

A working product is more than code

- Apart from the product, we will require a number of documents from you
 - This is not because we love documents
 - This is not because we don't understand modern ways of working
 - It is partly because they will support your project
 - It is also because writing and maintaining them forces you to explicate your thought processes

General project start-up activities

- Internal group contract
 - What is expected from employees in the company
 - Rules regarding meetings
 - Other practical matters
- Setting up your infrastructure
 - Development
 - Collaboration
- Plan internal education
- Project plan

Provided platforms 1 (2)

- We will be using Microsoft Teams for collaboration
 - TDDC88_2023_Cx
 - Course personnel are already members
 - Any documents you want to present to us shall be placed in Teams / General / Files / Output. We won't play detective searching your private folders when grading.
 - Apart from that, customize as you like

Provided platforms 2 (2)

- We will be using GitLab for development
 - <https://gitlab.liu.se/tddc88-company-x-2023>
- We will be using Kubernetes as target environment
 - Linked to your GitLab project
 - Use this for testing and deployment

Company website with roles and contact info

- Company must publish website
 - Pictures of all employees
 - ... with current roles and contact info
 - Add it as a tab in Teams to make it easy to find
- Keep this site updated

Toll-gate meeting (25 min / company)

- Your offer to fulfill customer needs
 - Design
 - High-level architecture
 - Plan: Features at each iteration
- Company
 - Convince us you are the best suited company



Role-playing at Toll-Gate

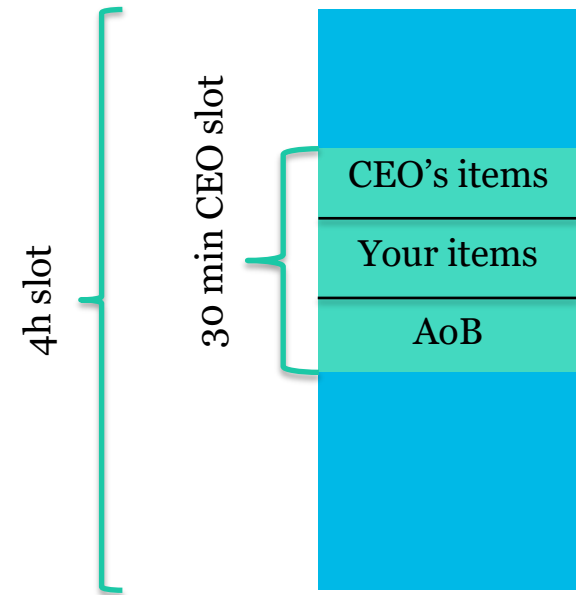
- Mandatory presence for the whole company
- But only 2-4 representatives actually participate
 - No help from the “audience”
 - Plan a meeting of 25 minutes, rest is for questions and feed-back
- Expect to receive input and new insights verbally
 - Make sure you capture them
- Aim is to “sign a contract” with the customer
 - For development of a first prototype
- Final contract at December presentation at VSSE (Valla Software System Expo)

Organize for efficient work

- Cross-functional teams are highly recommended
 - Required for Grade 4
- Establish tools and routines for collaboration and communication
- External communication (with customer, course staff)
 - Clear contact points, continuity in communications
 - Various roles in the company easily reached
 - Sign all your communication (email, etc.) with your company name and your role

Mandatory meetings every Thursday

- CEO meeting (Chief Executive Officer — "vd")
 - 30 min
 - Elicit company processes
 - Discuss problems and how they are being solved
- Supervisor meetings
 - 30 min each
 - Issues related to each supervisor's expertise



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Course personnel

Company CEO

Daniel Ståhl

daniel.stahl@liu.se

Supervisor

Architecture, Design, Integration

Yiran Wang

yiran.wang@liu.se

Supervisor

Requirements, Testing, CM, Quality

Torvald Mårtensson

torvald.martensson@liu.se

Examiner

Course leader

Kristian Sandahl

kristian.sandahl@liu.se

CEO role

- Elicit and advise / discuss:
 - Company's strategic decisions
 - What directions are currently being investigated?
 - How are problems brought up and handled?
 - What options were considered?
 - Why a certain choice (based on what)?
 - The CEO wants to be convinced that you know what you are doing and will not squander the significant investment your project represents.

CEO: Daniel Ståhl

- daniel.stahl@liu.se
- Background
 - Software Subject Matter Expert at Ericsson
 - Software engineering researcher and author
 - MSc from Linköping University;
PhD from University of Groningen, Netherlands
 - Associate Professor at Linköping University

Supervisor roles

- Guide product development processes
- The supervisor's first responsibility is not to answer all your questions, but to help you ask the right ones

Supervisor: Yiran Wang

- Architecture, Design, and Integration
- yiran.wang@liu.se
- Background
 - Current PhD student in Computer Science (IDA) at Linköping University
 - MSc in Statistics and Machine Learning from Linköping University

Supervisor: Torvald Mårtensson

- Requirements, testing, quality, configuration mgmt
- torvald.martensson@liu.se
- Background
 - Technical Fellow at Saab
 - Software engineering researcher and author
 - MSc from Linköping University;
PhD from University of Groningen, Netherlands
 - Associate Professor at Linköping University

Examiner: Kristian Sandahl

- Receives reports on progress, chairs internal meetings, decides on grades, collects opportunities for improvements.
- Background
 - MSc. LiU 1983, PhD LiU 1992
 - Epitec AB 1986-87; Ericsson 1995-2001
 - Project course examiner since 1984; 4 publications about project courses
 - Professor of Software Engineering at IDA, unit manager

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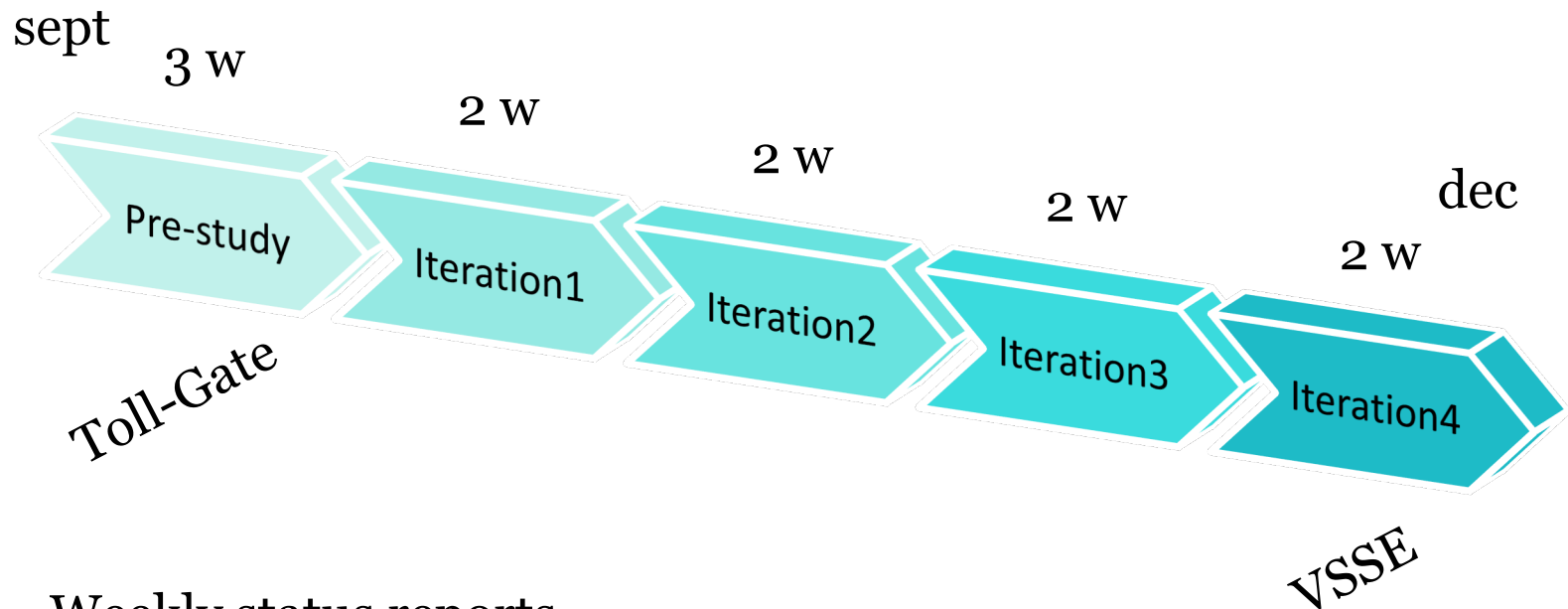
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Timeline example



- Weekly status reports
- 2 peer-reviews
- 2 reflection reports

Weekly status reports

- 1 report from each company
- Deadline every Monday 13:00 (pm)
- Mail to CEO, supervisors, examiner and all company members

Status report contents

- Brief (1 page), use bullet list
 - Progress since last week
 - Plans for next week
 - Risks and mitigating actions
- Time report
 - Time spent in the project for each employee.
Last week, accumulated time
Target: Total of ~160 h /employee
- Tools exist (e.g. Clockify), but simpler is often better.

Two individual reflection reports

- Max 1 page
 - Your own contributions within the project
 - Description of the work
 - Name collaborators
 - The most important things that you learned so far
 - Detailed individual time report
 - Log your activities, time spent, and collaborations
 - Granularity of 0.5 hours

Peer and self assessment

- Twice during the project you will assess the contribution made by you and by co-workers
 - Contribution and confidence in assessment
- Used for coaching and identification of potential issues within the company (e.g. in grading)
- Your ranking in the assessment will not be automatically translated to a certain grade.

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~~Presence check~~

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~~Reports~~

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Grading 1 (3)

- The examiner sets the grades
- CEO and supervisors advise the examiner
- CEO focus areas:
 - Process, organization, communication etc.
- Supervisor focus areas:
 - Process and result within their respective domains
 - Note well: The journey is more important than the destination
- Customer focus areas: Processes and product

Grading 2 (3)

- Individual grades can differ from company grades...
 - ... in either direction.
- Be transparent about your own work
 - Can your code/commits be seen in Gitlab?
 - Documents you have authored?
- If your role has changed, document this, inform the course staff

Grading 3 (3)

- The documents are NOT hand-ins to be done by the end of the project. They need to accompany your project and evolve along with it.
 - Example: If at any point you do not have a documented project plan, WE WILL ASSUME THAT YOU HAVE NO PLAN.
- The artifacts you create are not for the examiners, they are for you. If you do not use them, they are literally useless. “Are we done yet?” is the wrong question to ask.
 - Example: Your education plan is not a façade you create to make your project look good in retrospect. When we interview project members and they say “What plan?”, we will not be impressed.
- There’s no “someone else’s problem”.
 - If part of your project is failing, that is everybody’s problem, even if it’s not within the scope of your role. Nobody can do everything, but we look for and seek to recognize those who identify, highlight and respectfully and constructively seek to address them.
- Will you be the victim of your fellow project members’ poor performance?
 - Not if you understand the above.

VSSE – Valla Software Systems Expo

- Expo = companies show-case their products
- Session 1
 - Present product
- Session 2:
 - Summarize experiences (for the course)



You may be called to individual interview

- There may be multiple reasons for such interviews
- Make sure you are available between VSSE and December 15.

Cross-Company Collaboration

- You may use components produced by other companies in your solution.
- You may **ONLY** use their components with their consent. They may want to use one of yours in return, so sign an agreement to avoid misunderstandings.
- You may not outsource **ALL** of your development.

Using Generative AI

- Using generative AI in the project is okay in principle, but:
 - Do it responsibly. You are responsible for the output – you cannot abdicate that responsibility to the AI.
 - Do it transparently. Describe clearly what you used it for and what you learned.
- Think of it as Stack Overflow on steroids. Using Stack Overflow to find answers is fine, but copy-pasting code you don't understand is a very bad idea.

More information on the web

<https://www.ida.liu.se/~TDDC88/project/index.en.shtml>

- It's a lot of information - set off time to read and ask questions.

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~~Reports~~

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Meetings in the near future 1 (3)

- Role Assignment, 2023-09-01 10:15-12:00
- Each company self-organizes the meeting
- Course personnel may stop by to listen in

Meetings in the near future 2 (3)

- First Thursday session
- The CEO Meeting is for the entire company: use this meeting for company-wide conversations and decisions.
 - Schedule major decisions and planning for the CEO time slot.
 - The CEO will have questions and input – make sure there is room in the agenda for this!
 - Send agenda in advance

Meetings in the near future 3 (3)

- Supervisor meetings are intended for relevant roles.
- Time slots for 2023-09-07:

Company	Daniel	Torvald	Yiran
1	14:35-15:05	13:55-14:25	13:15-13:45
2	15:15-15:45	14:35-15:05	13:55-14:25
3	13:15-13:45	15:15-15:45	14:35-15:05
4	13:55-14:25	13:15-13:45	15:15-15:45

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Customer

- One customer this year: Region Östergötland
- The customer pays* for some of the product development cost
- The customer provides requirements as input → the company can develop relevant features for the market
- Detailed intro comes next.

* Within the course: with their time and interest

Good luck, and have fun :)

www.liu.se