

IN5140

Smart processes and agile methods in Software Engineering

Group session 1

Agenda

First hour:

- Practical information
- Do group exercises

Second hour:

- Continue doing exercises
- Discuss answers from group exercises



Teaching Assistants

- Karthik Shivashankar karths@ifi.uio.no
- Jayeong Song jayeongs@ifi.uio.no
- Lyra Valentina Hope lyhope@ifi.uio.no
- Two group sessions per week, Monday and Wednesday at 14:15-16:00
- Slides will be published after the group session

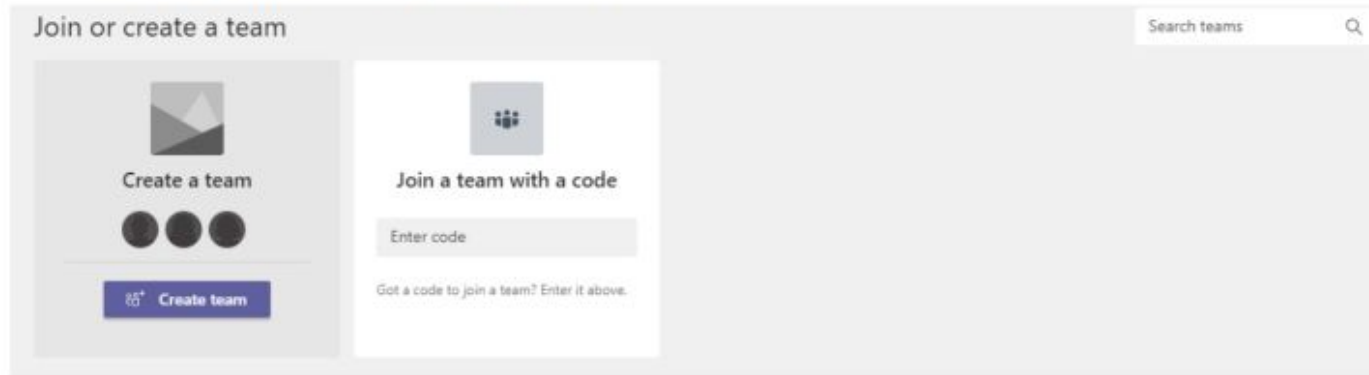


Teams

- Teams will be used as forum where you can ask questions

2. Join the course Microsoft Teams channel with UiO login using Code: **qolv5nt**

To use this code, the user must choose **Join or create a team**, and then type the code under **Join a team with a code**.



The screenshot shows the Microsoft Teams interface for joining or creating a team. At the top, there is a header "Join or create a team" and a search bar labeled "Search teams". Below the header, there are two main options: "Create a team" and "Join a team with a code". The "Create a team" option features a team icon, the text "Create a team", three dots, and a blue button labeled "Create team". The "Join a team with a code" option features a team icon, the text "Join a team with a code", a text input field labeled "Enter code", and a link that says "Got a code to join a team? Enter it above."



Project milestones throughout IN5140

What	Due date	% of total score
Group-form must be submitted	Before 31th August	
Deliverable 1 – The booklet	2nd of October, 23:59	passed/not passed
Deliverable 2 – BPMN diagram & reflection	Will be updated	passed/not passed
Deliverable 3 – Improvements on Deliverable 2	Will be updated	passed/not passed
Project Presentations	Will be updated	
Final exam	2nd of December, 15:00	

- Submit deliverables here (PDF): <https://devilry.ifl.uio.no/>

About forming groups for project

- Size of groups: 3-5 students.
- Either you want us to put you in a group, or you want to form group yourselves, you need to submit it using a form .
- Try submitting this form before 31st of August <https://nettskjema.no/a/440872>



**Let's get to know each
other!**

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Group Exercises

1. Define these concepts and describe its attributes?
 - a. Software system quality
 - b. Software development process
 - c. Software process improvement
 - d. Software project
2. Discuss how to develop software systems.
3. Discuss the different types of software maintenance and which type is the most important according to your group?
4. What are the characteristics of successful, challenging and failed software according to your group?
5. Discuss the important roles involved in the process of a system development
6. What are the important tools involved in the process of a system development

15 minute  break

Possible solutions

1. Define these concepts and describe its attributes? :

a) Software system quality

Could for example be:

- Correctness
- Maintainability
- Reliability
- Robustness

More attributes: <http://www.qasigma.com/2008/12/software-quality-attributes.html>

1. Define these concepts and describe its attributes? :

b) Software development process

The activities that are performed to develop a software system and the way they are performed. For example:

- Specification of requirements
- Design (architecture)
- Coding
- Testing
- Validation that the system satisfies the needs of the customer or user

1. Define these concepts and describe its attributes? :

c) Software process improvement

The process of improving an existing process.

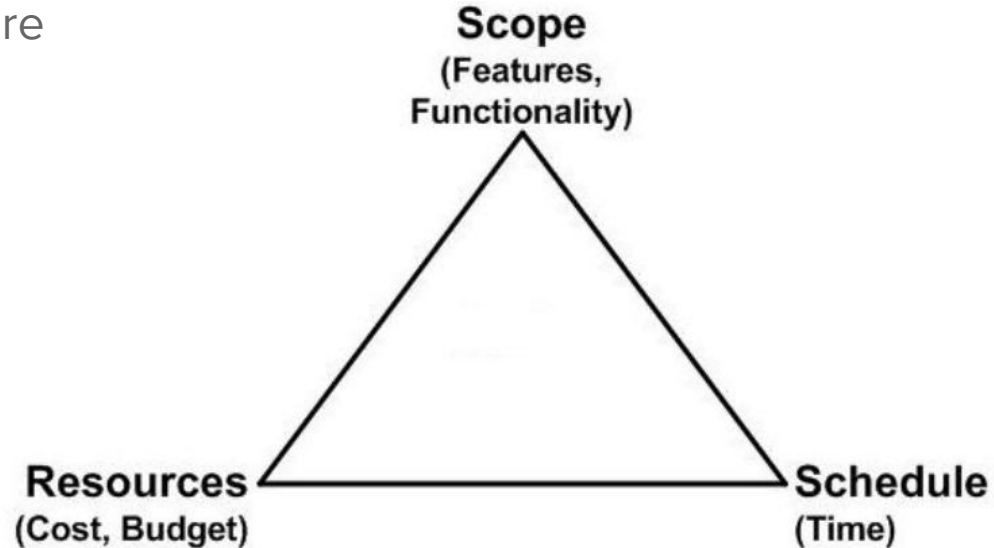
For example:

- Improve an activity within a process
- Improve a method/technique used in an activity

1. Define the concepts as follows and describe the attributes:

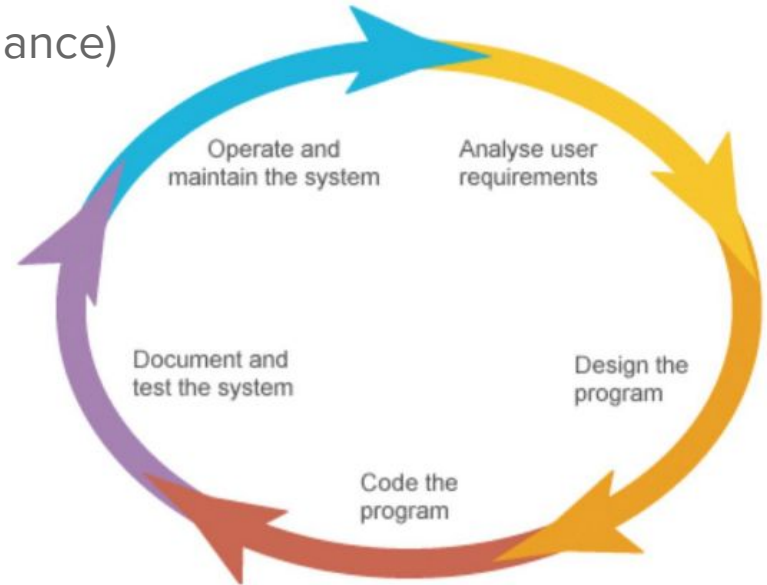
d) Software project

- The activities and processes that are involved in order to produce an observable and measurable result based on some requirements.
- “Magic Triangle” → tradeoffs



2. Discuss how to develop software systems

- Every SW produced is unique
- Includes all activities from the conception of a product to the final manifestation of it
- Can be anything (e.g. prototyping to maintenance)
 - new development
 - prototyping
 - modification
 - maintenance
 - ...and any other activities



3. Discuss the different types of software maintenance and which type is the most important according to your group?

- Corrective maintenance - Fixing bugs
- Preventive maintenance - Improving structure (re-engineering refactoring)
- Adaptive maintenance - Adapt to changing environments
- Perfective maintenance - New functionality

4. What are the characteristics of successful, challenging and failed software according to your group?

- Successful → Completed on schedule, budget.
- Challenged → Completed with shortcomings, delays etc.
- Failed → Canceled, not implemented.

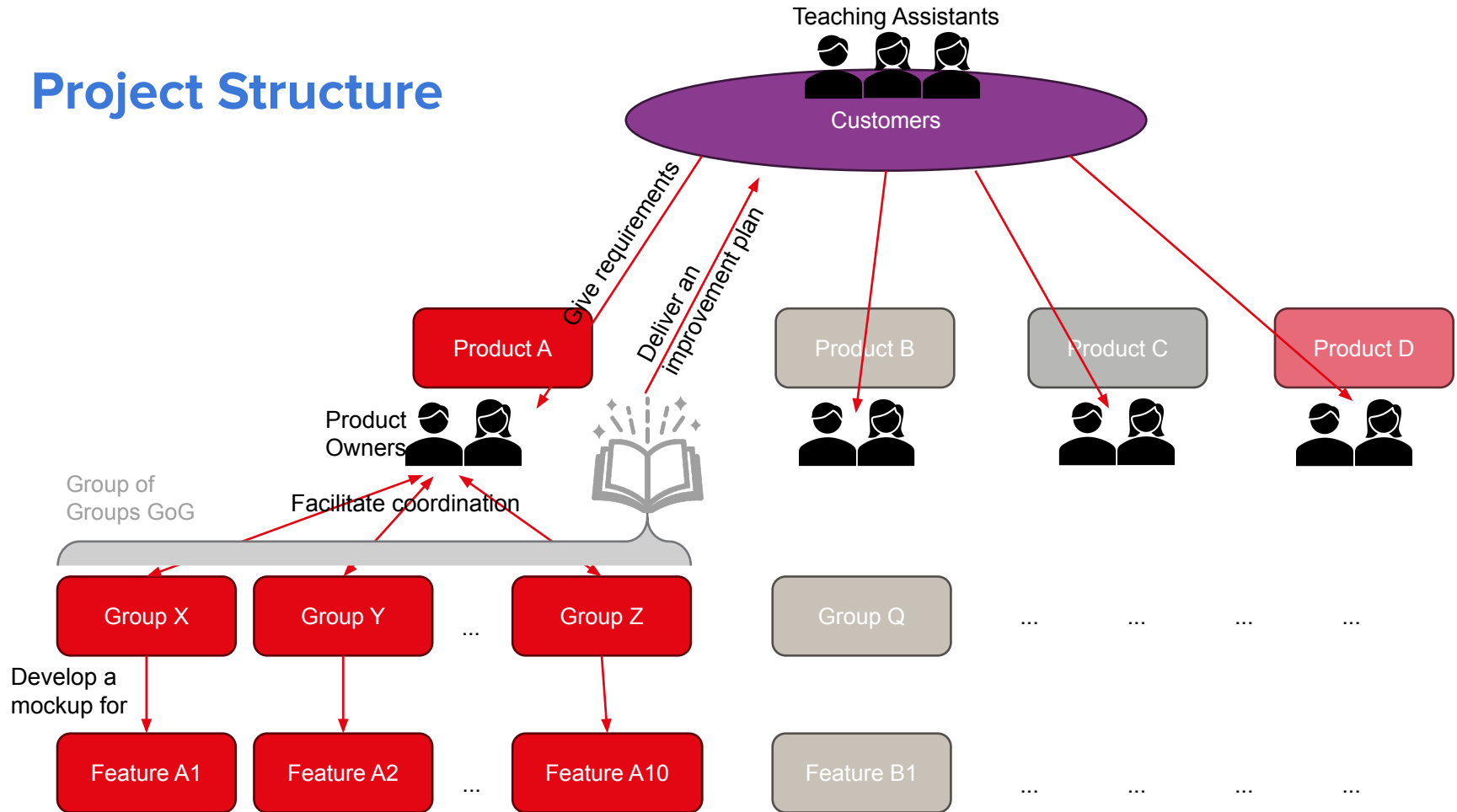
5. Discuss the important roles involved in the process of a system development

- Developer
- Maintainer
- Architect or System designer
- Graphics designer
- UX designer
- Tester
- Project Manager
- Business consultant
- User or customer representative

6. What are the important tools involved in the process of a system development

- Development (IDE) → [Eclipse, Webstorm, IntelliJ]
- Configuration or change management → [Git, Subversion, Github]
- Testing → [Sanitizer, Selenium, SwaggerIO]
- Diagram construction → [draw.io, Eclipse, Lucidchart]
- Project management → [Jira, Azure DevOps, Kanban board]
- Bug and issue tracking → [Jira, Azure DevOps]

Project Structure





Next Week Group Session:

KANBAN GAME