Code Discussion and Review

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- Problem statement
- Requirements engineering phase
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Problem statement

- Communication outside of tutorials difficult
- Multiple platforms
- Existing software lacks functionality

Deliverables

- Project proposal
- Design report
  - Design
  - Test plan and -results
  - Source code
  - Manual (installation and usage)
- Slides of this presentation
- Poster

Global choices

- Agile work methodology
- Weekly meetings with client/supervisor
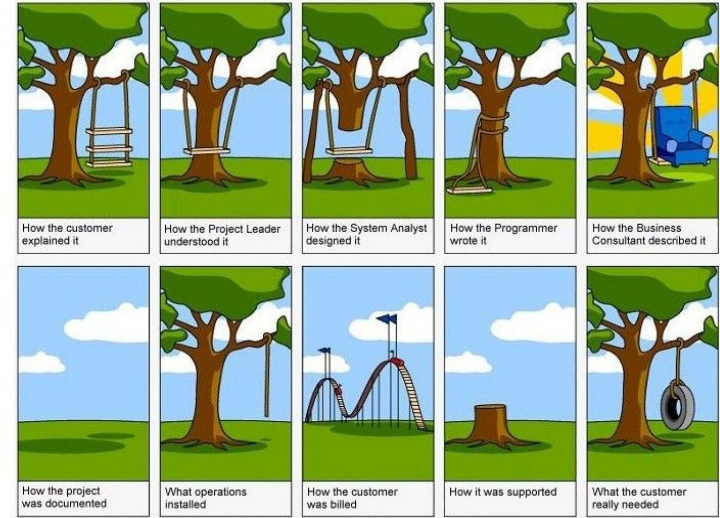- Collocation
- Division of labour

Requirements Engineering Phase

Methodology

- Requirements Inception
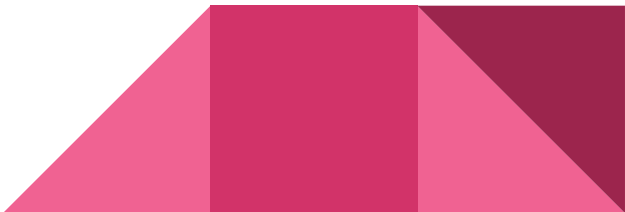- Requirements Analysis
- Requirements Specification

Stakeholders

- A. Fehnker
- M. Huisman
- L. Ferreira Pires

Summary of requirements

Must

- ✔ Login (preferably with University of Twente)
- ✔ Hierarchy of modules, courses, exercises and projects
- ✔ Upload code
- ✔ Syntax highlighting
- ✔ Line comments
- ✔ Reply to comments
- ✔ Custom rights for exercises

Summary of requirements

Should

- ✔ Moderation
- ✘ Closing threads
- ✘ Tags

Summary of requirements

Could

- ✖   Sticky comments
- ✖   Automatic feedback
- ✖   Git backing
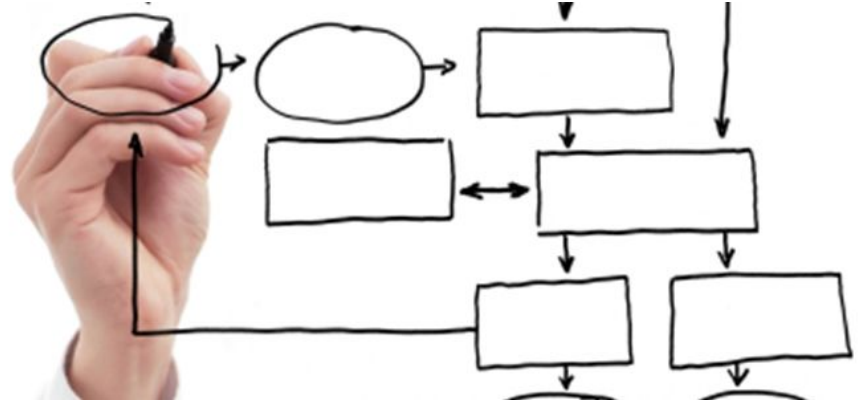
Summary of requirements

Would

✕ Auto moderation.

Design Phase

Methodology

- Scenarios
- Mock-ups
- Entity relation diagrams

Database

- Entity relationship diagram
- Rights system
    - Bit mask
    - Functions for modules, courses, exercises, projects and comments.

API

- REST
- Swagger
  - Paths
  - Tests
  - Specification of requests and responses

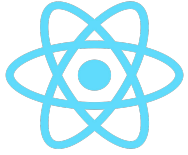# Front end

- Mock-ups
- URL paths/pages

Choices

- UT login
- Canvas integration
- Loose coupling front and back end
- Rights system design
- Front end data processing

Technology

Test plan

- Unit testing
- Selenium testing
- System testing
- Swagger testing
- Acceptance testing

Implementation

Methodology

- Task division
- Issue based development
- Industry ready git standards

Problems and solutions

- ORM vs SQL statements
- Slow loading of pages
- Swagger
  - Response headers
  - Error handling
- Layout of file page

Demo

Discussion

Positive

- Communication
- Task division
- Implementation

Negative

- Design too high level
- Manual tests

Future work

- Missing should, could, and would requirements
- More information
  - Unread messages
  - Type of author
  - Real names of users as known to University of Twente
- Tools for bulk changes (cli)
- Professional front-end

Questions & Answers