Next milestone: API design

- Deadline: **Sunday 10. April** (3 weeks)
- Deliverable: **Design document**, **API classes**
- Presentation: **Tue 12. April / Mon 18. April**

Design document

1. Purpose

2. Class diagram

3. Architectural design

    1. Component-level design

    2. Design patterns

    3. Discussion

4. Post-design changes

API classes

- Design for usability
  - How will a client use your library
  - Is it easy to perform important tasks
  - Write use case examples
- Design for extensibility
  - Adding new functionality
  - Changing existing functionality
- Design for testability
  - Modular and observable effects

Parts of API

- Class-level
  - Class name
  - Inheritance structure
  - Documentation
- Feature-level
  - Feature name
  - Arguments and return type
  - Contracts
  - Documentation

Design principles

- Information hiding
- Command-query separation
- Option-operand separation
- Self-documentation

Talk: How To Design A Good API and Why it Matters

- http://www.infoq.com/presentations/effective-api-design

- http://www.infoq.com/articles/API-Design-Joshua-Bloch

- Youtube version:
  http://www.youtube.com/watch?v=aAb7hSCtvGw