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Towards an Online Programming Platform Complementing Software Engineering Education

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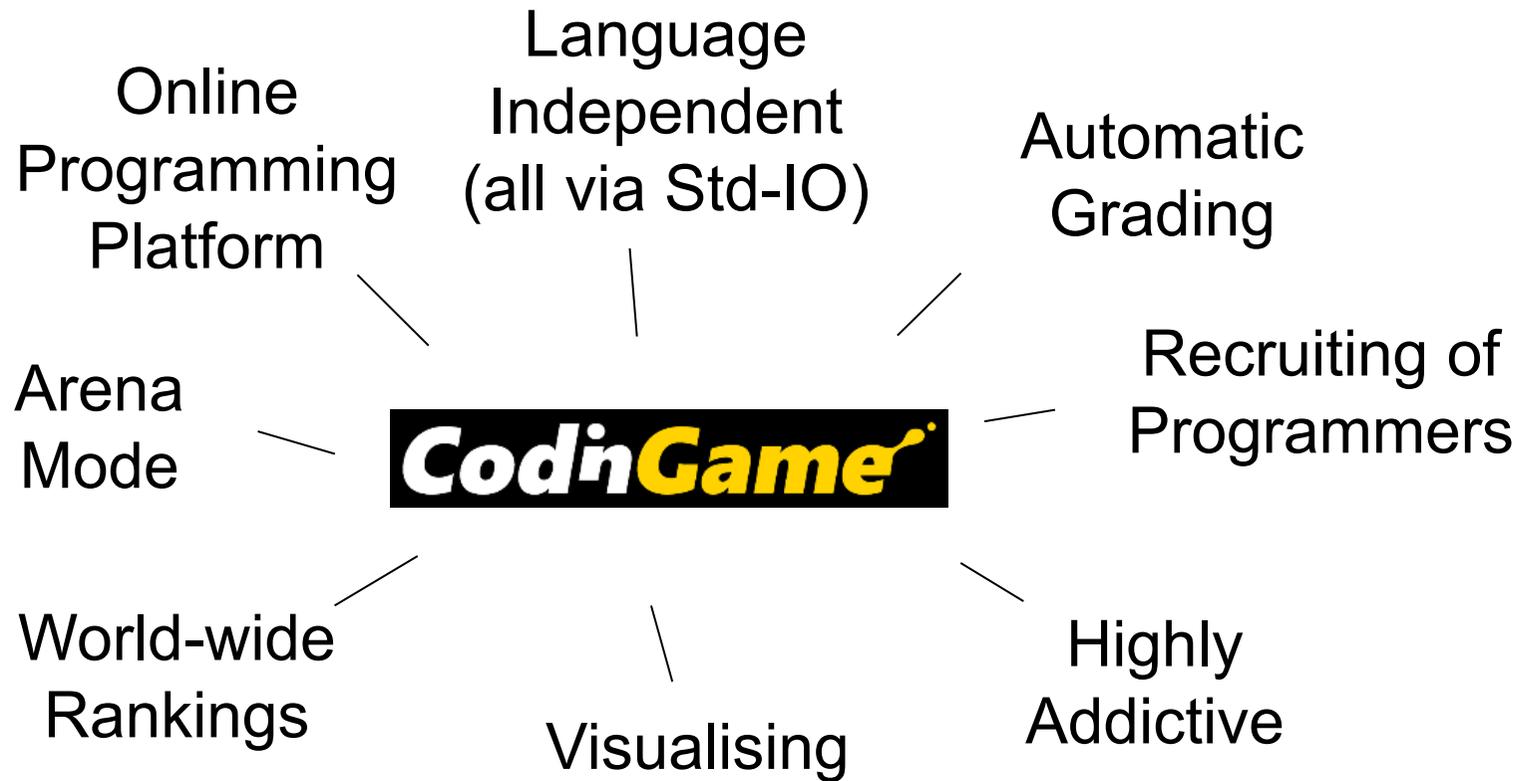HAW HAMBURG

Programming

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Online Programming Platform (OPP)

- Our definition of an OPP:

  – a **web-based** platform

  – that offers several **assignments** of varying complexity,

  – a possibility to **enter code** that solves an assignment

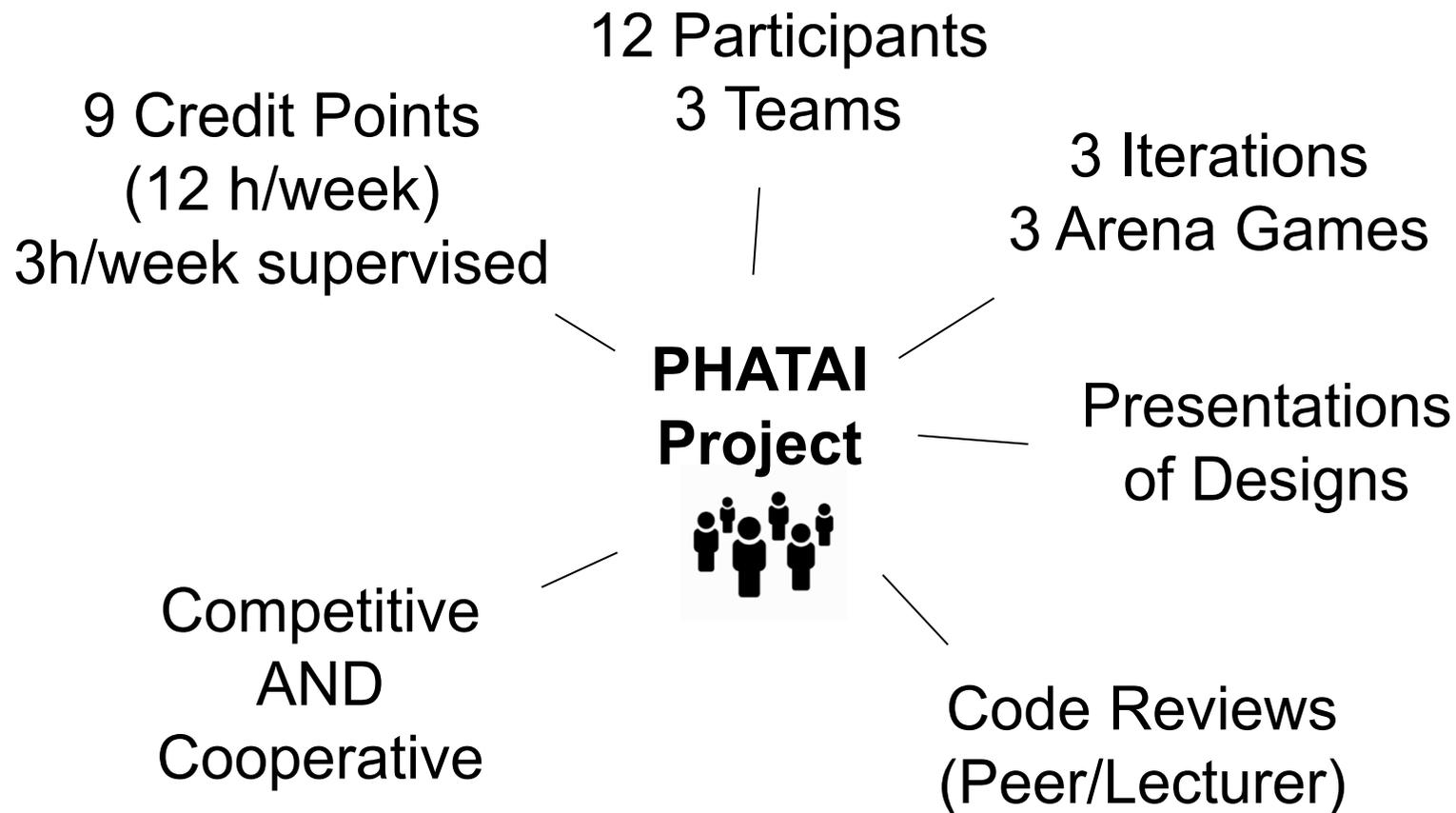 – an **automatic feedback mechanism** for the proposed solutions.

The PHATAI Project

- **PHATAI** – „**P**rogram **H**ard **A**nd **T**alk **A**bout **I**t"

  – Practice Programming

  – Practice Programming in a Team

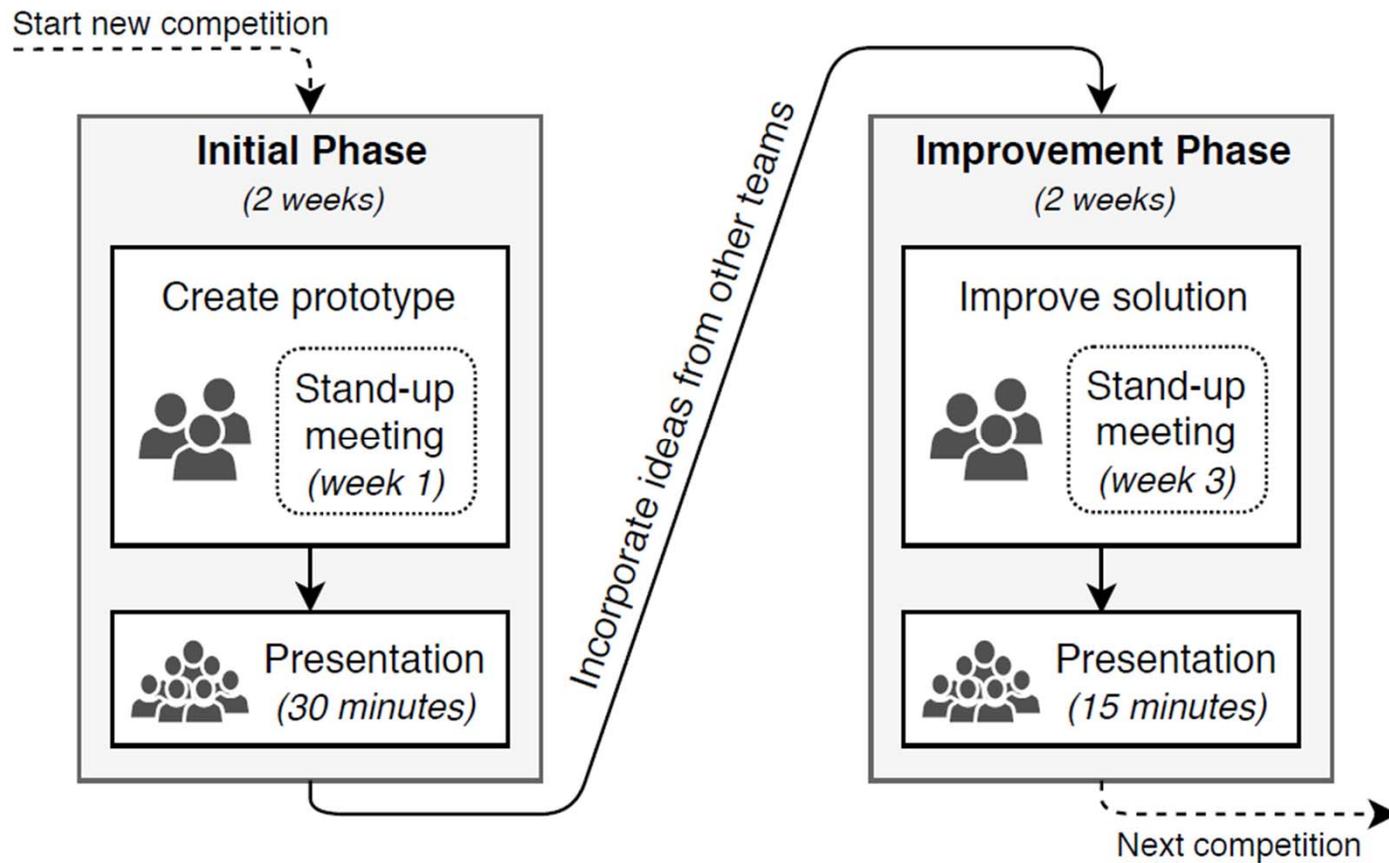 – Practice Talking About Programmed Design

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Used Platform

Online
Programming
Platform

Language
Independent
(all via Std-IO)

Automatic
Grading

Arena
Mode

Recruiting of
Programmers

World-wide
Rankings

Visualising

Highly
Addictive

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Summer Term 2019

12 Participants
3 Teams

9 Credit Points
(12 h/week)
3h/week supervised

3 Iterations
3 Arena Games

**PHATAI
Project**

Presentations
of Designs

Competitive
AND
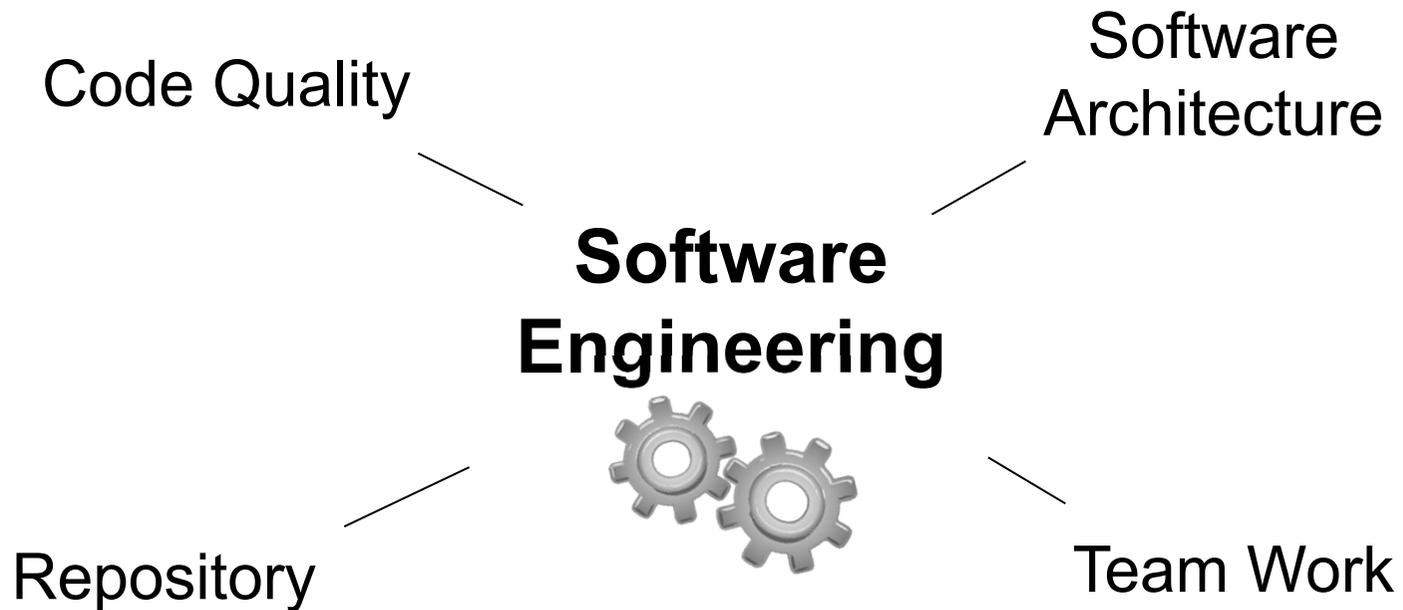Cooperative

Code Reviews
(Peer/Lecturer)

A PHATAI Iteration

*"Any fool can write code
that a computer can understand.
Good programmers write code
that humans can understand."*

Martin Fowler

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Programming and SE

Code Quality

Software
Architecture

**Software
Engineering**

Repository

Team Work

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Our Requirements

- Main Stakeholders:
  - Students
  - Lecturers
  - Developers
  - Administrators

**Not met
by systems
on the market.**

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Conclusion

- Existing OPPs are great for improving individual skills.

- None of the platforms we examined addresses
    - code quality and maintainability
    - software architecture
    - team-based programming (repository, code reviews)

- All of these are important topics in university education.

- We consider this a market gap.

- We will investigate into filling this gap.

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Danke für die Aufmerksamkeit!

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