

# Software Architectures

From Design Patterns to  
Enterprise Architecture

Overview & Lecture Outline



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Downloads

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<http://www.thewhitespace.de/teaching/sarch13>

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- Plan: This lecture consists of three parts...
  - 1.Design Principles (2 sessions)
  - 2.Design Patterns (3 sessions)
  - 3.Enterprise Architecture (2 session)

# Basic programming skills are required.

- Knowledge of OOP concepts is necessary; i.e., you should understand the following terms:
  - class, interface
  - object
  - inheritance
  - polymorphism
- Good knowledge of the Java programming language
- Working knowledge of UML
- Basic understanding of “Agile Software Development Processes”

# The Humble Programmer

Communications of the ACM, Vol. 15, Issue 10, 1972

As long as there were no machines,  
programming was no problem at all; when  
we had a few weak computers,  
programming became a mild problem,  
and now we have gigantic computers,  
programming has become a gigantic  
problem.



E.W. Dijkstra

# Lecture / Exam

- Lecture: usually Fridays 14:00–17:15 (including a 15 minutes break), some dates don't follow this rule (see plan!)
- The slides are in English  
(Key terms will be translated to German.)
- Written exam: to be announced



# Essential Bibliography.

- Design Patterns - Elements of Reusable Object-Oriented Software; Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides; Addison-Wesley, 1995
- Patterns of Enterprise Application Architecture; Martin Fowler; Addison-Wesley, 2012

