

Génie Logiciel et Gestion de Projets

INFO-F-407

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ULB

Génie Logiciel et Gestion de Projets

Organisation

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Organisation

- Main focus is project
 - group work (+/- 6 people)
 - can choose between 2 topics
- Exam
 - project work
 - defense of project
 - questions for each individual

Course Overview

04/02	Introduction/OOP
11/02	OOP/Software Processes
18/02	XP/Unit testing
25/02	Good OO Design/ Refactoring
03/03	Profiling/ Patterns
10/03	Patterns/ Projects
17/03	??
07/04	Software Life Cycle: Documents
14/04	Documents/ Projects
21/04	Versioning Systems
28/04	Project Management
05/05	Project Management/ Projects
12/05	Conclusion

Structure of the Slides

- For each part of the course
 - roadmap
 - for each item in the roadmap
 - [roadmap]
 - content
 - references

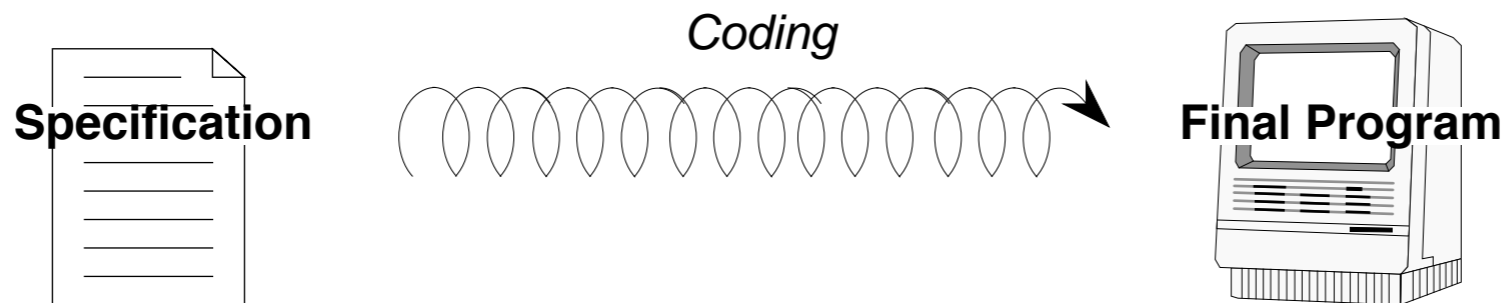
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Introduction

Roadmap

- Why software engineering?
- What is software engineering?
 - three definitions and related issues

Why Software Engineering?



- Where did the specification come from?
- How do you know the specification corresponds to the user's needs?
- How did you decide how to structure your program?
- How do you know the program actually meets the specification?
- How do you know your program will always work correctly?
- What do you do if the users' needs change?
- How do you divide tasks if you have more than a one-person team?

Definition and Issues

[Bruegge]

“state of the art of developing quality software on time and within budget”

- Trade-off between perfection and physical constraints
SE has to deal with real-world issues
- State of the art!
“best practice” is a moving target, community decides on it
life-long learning

Definition and Issues

[Parnas]

“multi-person construction of multi-version software”

- Team-work
Scale issue (“program well” is not enough) and communication issue
- Successful software systems must evolve or perish
Change is the norm, not the exception

Definition and Issues

[Sommerville]

“software engineering is different from other engineering disciplines”

- Not constrained by physical laws
limit = human mind
- It is constrained by political forces
balancing stake-holders

References

- [Sommerville] Ian Sommerville. Software Engineering 8th edition. (2004)
- [Bruegge] Bernd Bruegge and Allen H. Dutoit. Object-Oriented Software Engineering: Conquering Complex and Changing Systems. Prentice Hall. (2000)
- [Parnas] David Lorge Parnas. Software Engineering or Methods for the Multi-Person Construction of Multi-Version Programs. LNCS. Vol. 23. Programming Methodology, 4th Informatik Symposium. 1974.