Génie Logiciel et Gestion de Projets

INFO-F-407

Ragnhild Van Der Straeten

2008-2009

ULB

Génie Logiciel et Gestion de Projets

Organisation

Ragnhild Van Der Straeten
VUB, 4K209
Campus Etterbeek
rvdstrae@vub.ac.be

http://decomp.ulb.ac.be/education

Organisation

- Main focus is project
  - group work (+/- 6 people)
  - can choose between 2 topics
- Exam
  - project work
  - defense of project
  - questions for each individual
  - quotation: 3 (défense pers) + 2 (défense gr) + 7 (travail) + 8 (qualité)

Course Overview

02/02	Introduction/OOP
09/02	OOP/Software Processes
16/02	XP/Unit testing
23/02	Good OO Design/ Patterns
02/03	Patterns
09/03	Refactoring/ Projects
23/03	Software Requirements Engineering
30/03	SRE/ Re-engineering
20/04	Re-engineering/ Projects
27/04	Project Management
04/05	Project Management/ Advanced SE
11/05	Advanced SE/ Conclusion

Structure of the Slides

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

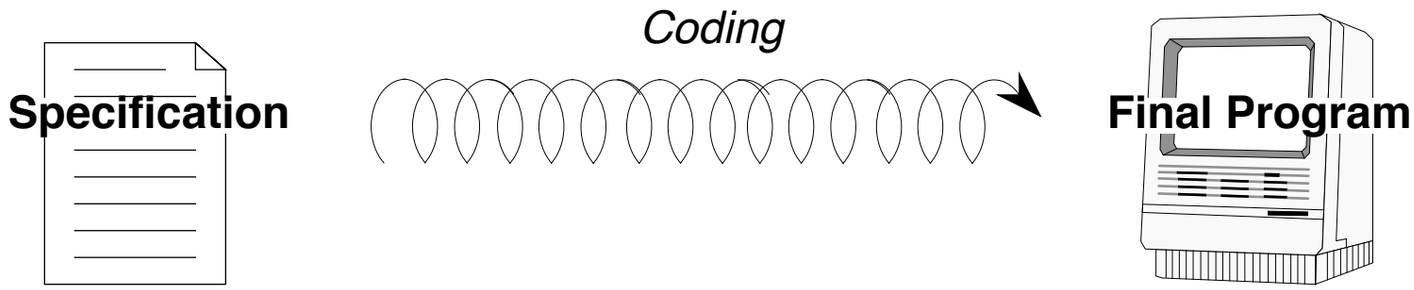
Génie Logiciel et Gestion de Projets

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.