INF5040/9040
Open Distributed Systems

Course overview

Lecturers: Roman Vitenberg (romanvi)
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Teaching assistant:
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Lectures and exercises

➢ **Lectures**
  ➢ Monday   10:15 -12:00, OJD 2423 Seminar room Java
  ➢ First time 24. August
➢ **Exercises**
  ➢ Wednesday 10:15-12:00, Smalltalk auditorium
  ➢ First time 2. Sept

Learning goals

- Provide a basic understanding of
  - fundamental **principles**, **concepts** and **state-of-the-art**
  - **key technologies** for realising distributed interactive systems of the future
- Gain **practical experience** with state-of-the-art platforms to realise distributed applications
- Provide knowledge about **today´s challenges** to open distributed processing technology, including
  - multimedia
  - ubiquitous and mobile computing
  - sensor networks

Course elements

- 13 lectures (including the summary)
- About 12 group meetings
  - Introduction to mandatory programming exercises
  - Mandatory programming exercises (3 small projects)
  - Theoretical exercises (group work & discussions)
- Detailed teaching plans and copy of the slides are made available on the web
  - NOTE: only the INF5040 pages will be maintained (not INF9040)

Exam and grading

➢ Oral exam constitutes 100% of the grade
  ➢ Examinable material is based on the lectures (corresponding to the textbooks), theoretical exercises, programming assignments
➢ Submission of all programming assignments (complete and working) is a prerequisite
  ➢ Tested but not graded

Syllabus

➢ Taken from

  ➢ G. Coulouris, J. Dollimore, T. Kindberg, G. S. Blair "Distributed Systems – Concepts and Design", fifth edition, Addison-Wesley.

  ➢ A. Tanenbaum, M. van Steen, "Distributed Systems – Principles and Paradigms", 2nd edition, Prentice-Hall

➢ The syllabus is specified on the lecture schedule web page for each lecture topic

Topics

- Introductory lecture (overview)
- System models
- Distributed objects and object-based middleware
- Object interaction using RMI
- Software components and distributed systems
- Communication paradigms

- Time and coordination
- Distributed transactions
- Replication
- Peer-to-peer
- Mobile and ubiquitous computing
- Distributed multimedia systems
- Web-based systems

See also plenary sessions schedule on course web