Information Systems

Organization

Temur Kutsia

RISC-Linz
kutsia@risc.uni-linz.ac.at

Organization

- Course web page:

  `http://www.risc.uni-linz.ac.at/education/courses/ws2008/is/`
- Intended audience: students of mathematics who did not study related subjects before.
- Literature:
  - C. J. Date: An Introduction to Database Systems. Eights edition, Addison Wesley, 2004.
  - G. Brill: Codenotes for XML, Random House, 1998.
  - Lecture notes from the previous years.
  - Slides.
  - Material from the Web.
- Exercises will be given.
- Written exam at the end of the semester.

Course Structure

Two parts:

- Databases
- XML

Course Structure. Databases part

- Theoretical foundations:
  - Relational data modeling;
  - Web-based information systems with relational database support (briefly).
- Practical tools:
  - RDBMS MySQL.

Course Structure. Databases part

- Theoretical foundations:
  - Relational data modeling;
  - Web-based information systems with relational database support (briefly).
- Practical tools:
  - RDBMS MySQL.

Goal: After the course, the student should have

- a clear concept of elementary problems and solution techniques in relational data modeling,
- basic knowledge in relational database manipulation.

Course Structure. XML part

- Basics:
  - Data description;
  - Document validation, transformation, querying.
- Tools:
  - XML editing and validation tools (e.g. EditiX).
  - SAXON - The XSLT and XQuery Processor.

Course Structure. XML part

- Basics:
  - Data description;
  - Document validation, transformation, querying.
- Tools:
  - XML editing and validation tools (e.g. EditiX).
  - SAXON - The XSLT and XQuery Processor.

Goal: After the course, the student should be able

- to create moderately complex XML documents,
- validate them using XML Schema,
- address their parts using XPath,
- transform them into a displayable HTML documents by XSLT.