DBTech EXT* Workshop on Database Modeling and Semantic Modeling
Thessaloniki ATEI, 10-11 September 2009

Theme of Thursday 10 Sept 2009 is "Database Modeling"

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The theory part covers short introduction of

- the methodology of designing and implementing a relational database using UML data modeling by Rational Rose Data Modeler 7.0.0 and by Oracle Data Modeling 1.5 using Barker or Bachman notations on logical data modeling
- Phases of Database Design
  Forward Engineering
  - Conceptual Modeling
  - Logical Modeling
  - Physical Modeling

  Reverse Engineering
- the tools and the exercises in the afternoon lab

Hands-on workshop part

- database modeling laboratory
- student groups will use the tool (Rational Rose) to design and implement (in DB2) a small relational database as case study designing of a database of experts and their papers.
- reverse engineering from DB2 using Oracle Data Modeling tool and generation of the modified DDL script to be synchronized in the database
- reverse engineering: laboratory tasks

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The learning outcome:

- working knowledge of the total process of modeling, designing, implementing, and testing of a small relational database
- forward engineering and reverse engineering
- experience on using the selected CASE tools
- experience on using a database (DB2 Express-C)
- experience on use of a virtual computer

Day-1 Reference info & bibliography:

Connolly & Begg, Database Systems (4th or 5th edition)

- Part 4 Methodology Chapters
- 5th ed. 2009 Appendix D Database Modeling Methodology

Ramakrishnan, Database Management Systems (any English or Greek edition)

- Chapter: Introduction to Database Design
- Chapter: Information Retrieval and XML Data

Using Rose Data Modeler, 2001
ftp://ftp.software.ibm.com/software/rational/docs/v2003/win_solutions/rational_rose/rose_dm.pdf

Oracle SQL Developer Data Modeler User's Guide, 2009
http://download.oracle.com/docs/cd/E15276_01/doc.20/e13677.pdf