- Review of lecture materials
  - Relational models
  - Relational algebra
- Homework #1
- Project 1B
Review

• Relational Models
  • table-style model for data representation
  • table design is not easy
    • multiple factors involved: concise, no redundancy, data consistency
  • theory to learn later
• E/R analysis - software engineering
Review

• Relational Algebra
  • Used to query databases to find out answers
  • Formal approach
    • Practical approach -> SQL
  • relation => relation
  • Set semantics: duplicates removed
    • SQL: bag semantics (performances)
Review

- Relational Algebra
  - select, project, rename
  - cross product, natural join, theta join
  - union, difference, intersect
  - division
- General advise: think of complement
Homework 1 Solution
More practice

• Class(dept, cnum, title)

• all departments that offer at least two classes?
More practice

- Class(dept, cnum, title)
- Enroll(sid, dept, cnum)
- all pairs of students who are taking at least one EE class in common, but not any common CS classes (return each pair once).
Project 1B

- MySQL uses SQL, however, not exactly.

- Tasks:
  - Create tables
  - Load data
  - Simple queries
  - Constraints
  - Web interface for query
Questions?