Midterm

Wednesday, 12:30-1:20, in class.

• Main topics
  – SQL
  – E/R diagrams
  – Conceptual design, BCNF
  – And a little XML (very lite)

Open book exam

I. SQL

• Basic SELECT-FROM-WHERE
• Aggregates and GROUP BY
• Subqueries and non-monotone queries
  – NOT EXISTS
  – ALL
• INSERT/DELETE/UPDATE

II. E/R Diagrams

• E/R diagram basics
  – entity sets, relationships, IS-A, weak entity sets
  – Read all slides - including weak entity sets
• Conversion to relations
  – What are the keys? The foreign keys?
• Subtleties
  – Many-one or one-one relationships
  – IS-A
  – Weak entity sets
### III. FDs and BCNF

- Anomalies
- Basic definition
  - What does $X \rightarrow\rightarrow Y$ mean, how do we check if it holds
- Inference
  - Armstrong’s rules, $X^+$
- BCNF
  - Understand how to use the algorithm on the slides

### Final Advice

- Open book
  - But don’t plan on reading during the midterm!
- Some questions are easy, others are harder
  - Do the easier ones first
- Have fun!
  
  For some definition of fun!