Introduction to Database Systems
CSE 444

Interlude
Midterm Topics
October 26 2007

Midterm
Monday, 10:30-11:20, 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 (for midterm and/or final)
• 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 --> Y mean, how do we check if it holds
• Inference
  – Armstrong’s rules, X+
• BCNF
  – 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!