1 Administrivia

Announcements

Assignment

From Last Time

Atomic, durable, and distributed transactions.

Outline

1. Course evaluation.

2. Review for final.

Coming Up

Project demos and final.

2 Review For Final

- Chapters covered: 8, 9, 11, 14, and 15.
• Same format as last time:

1. Short answer/definition: 4 @ 15 points each.

2. Problem solving: 2 @ 20 points each.

• This exam will count for 22.5% of final grade, as will the midterm.

1. Normalization:

   (a) Functional dependencies, closure, attribute closures. Use in checking entailment.

   (b) Decompositions: lossless, dependency preserving.

   (c) Minimal covers.

   (d) BCNF, 3NF. BCNF decomposition, 3NF synthesis.

2. Triggers:

   (a) General form.

   (b) Consideration, execution, granularity.

   (c) Multiple enabled triggers.

   (d) Controlling cascading triggers. (Hand-off discussion to cascading triggers expert, John T.)

   (e) PL/pgSQL.

3. Physical disk organization:

   (a) CHS addressing and components of access time.

4. Data storage structures:

   (a) Heap structure.
(b) Sorted structure.

(c) Indexing schemes: clustered/unclustered, sparse/dense, search keys with multiple attributes, multi-level indices (ISAM, B+ trees).

(d) Efficiency analysis.

5. Query processing:

(a) External sorts, projections, unions, differences.

(b) Select.

(c) Join.

(d) Access paths and efficiency analysis.

6. Transactions:

(a) Isolation.

(b) Atomicity.

(c) Durability.

(d) Distributed transactions.