

Midterm Review

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1 Administrivia

Announcements

Assignment

From Last Time

Outline

- 1.

Coming Up

2 Midterm Review

1. Two sections:
 - (a) Short answer/definition: 4 @ 15 pts. each.
 - (b) Problem solving: 2 @ 20 pts. each.
 - E/R design.
 - Queries in relational algebra, SQL, and TRC.

2. Basics of relational databases: relation, tuple, attribute, domain.
3. Database schemas: physical, conceptual, view.
4. Integrity constraints: domain, static, dynamic, semantic.
Key constraints (candidate and primary keys). Foreign keys and referential integrity.
5. SQL **Correct syntax**:
 - (a) Table creation. Keys, checks.
 - (b) Assertions.
 - (c) Views.
 - (d) Select processing, including `GROUP BY` and `HAVING`.
6. E/R design. Entities, relationships. Attributes and domains. Set-valued attributes. Keys. Schematic conventions. Participation constraint. Use of arrow with relationships.
Conversion to relational model.
7. Relational algebra. **Correct syntax**. Select, project, union, set difference, Cartesian product, joins, division.
8. TRC. Existential and universal quantifiers. Equivalence with relational algebra and SQL. **Correct syntax**.