CSE 4331/5331 Data Models and Implementation

Module I Summary & Test details

Sharma Chakravarthy
Department of Computer Science and Engineering
Information Technology Laboratory
University of Texas at Arlington
sharmac@cse.uta.edu
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Test 1 Details

- **September 25, 2025 (Thursday) during class time <u>for all sections</u>**
  - **I usually make the paper for 65 to 70 mins; you will have 80 mins (entire class period)**
  - **Answer questions in the space provided**
  - **Anything outside that will not be considered or graded**
  - **You will do the whole test/exam on the test sheet and submit it at the end**
  - **You should not run out of time if you keep your answers short**
- **For all section, Test 1 will be in person**
  - **During the class period in the class room WH 308**

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Material for Test 1 includes

- Intro to DBMS
- Storage, buffer manager, file types
  - Project Ia on use of indexes
- ISAM, B, and B+ tree indexing, Hash, and Bitmap indexing
  - Index types
  - Insert/delete algorithms
- External sort
- Application of cost model and analysis for scenarios
- Importantly
  - Work on practice problems
  - Work on questions on my slides
- Common sense

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Test 1 (more information)

- Will be a collection of short answer questions, working out small problems, intuition behind usage etc.
  - Read questions carefully; consider points allocation for the answer size
    - A question on storage structures
    - One or two question on indexing
      - One related to the project
    - A question on application of i/o cost formulas
- Point distribution for each sub-topic may vary
- Points will be given for the approach and logic
  - Small numerical errors maybe ignored
- short answer questions on your conceptual understanding will be asked.

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Test 1 (sample questions for quiz/test 1)

- T/F with justification (1 + 1)
  - Sparse index can be created on *heap* data file
  - A primary index can be created on any subset of attributes of the relation
- Others
  - Given some indexes on a relation, show which indexes will be beneficial for a set of given queries and why?
    - May have to use cost analysis
  - Insert or delete into a B+ tree
  - 1 question on external sorting
  - 1 question on hash indexing

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Thank You !!!

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