Final

• On Sunday May 06, 2018

• 9:00 am – 10:45 am (105 minutes)

• Location: Lattimore 201

• Coverage: Cumulative
Final

- 60 pts
  - 20 pts short questions
  - 40 pts longer questions

- There will be extra credit problems!
Short Questions

• You need to study everything.

• Topics before MT are included
The topics you do not need to review!

• I will not ask questions on:
  – Cover and Minimal Cover
  – Overly complexed relational algebraic expression (simple expressions are included)
  – MongoDB
  – Spark
  – PHP and MySQL
Distribution

- 1/3 or less: Before MT
- 2/3 or more: After MT
Short Questions

• Comprehensive and Cumulative
  – Everything would be covered
  – Questions on: SQL, ER Diagram, BCNF, Disk IO, Optimization, Transactions  i.e., pretty much everything
Long Questions

• Questions will have parts

• Mostly based on topics covered after the MT
COURSE COVERAGE
What did we learn in this course (Before MT)

User Perspective

Why Database Systems (vs. List or Microsoft Excel)

How to design a database system? (Requirement Analysis; Queries Supported, Forms (for input), Reports (for output))

ER Diagram

Relational Schema and SQL Queries
What did we learn in this course (After MidTerm)

How and Where to Store the data?

Do I need indexing?

How to make the queries optimized?

How to make sure all the transactions maintain ACID property?
Chapters to Study for Final

• Whatever we covered before the midterm:

• Whatever we covered after midterm:
  – Chapters 1 to 9

  – File Structures, Indexing, and Hashing
    • Chapter 16 (Disk Storage)
    • Chapter 17 (Indexing)

  – Query Optimization
    • Chapter 18
    • Chapter 19

  – Transactions
    • Chapter 20
    • Chapter 21
    • Chapter 22

For most of the questions, going through the slides, quizzes, and problem sets are good enough.

But, for a few questions, you need to have profound knowledge. For that no alternative to reading the textbook.
Topics to Study

• Main Modules:
  – File Structures, Hashing, Indexing
  – Query Processing and Optimization
  – Transactions
  – Projects
    • Project 2: SQL + Triggers

Each of these 4 sections is worth between 10 and 20 pts.

No question on Functional Dependencies
No question on Normalization
No question on ER diagrams
No question on MongoDB
That's all

“Thaaat's all Folks!”
Acknowledgement

- CS 145 offered by Stanford University
- Textbook authors
- Numerous websites

- Last but not the least

All of you

THANK YOU
It's Exam Time!
Here's a big GOOD LUCK!
Wish to you