

CSC 261/461 – Database Systems

Lecture 27

Spring 2018

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

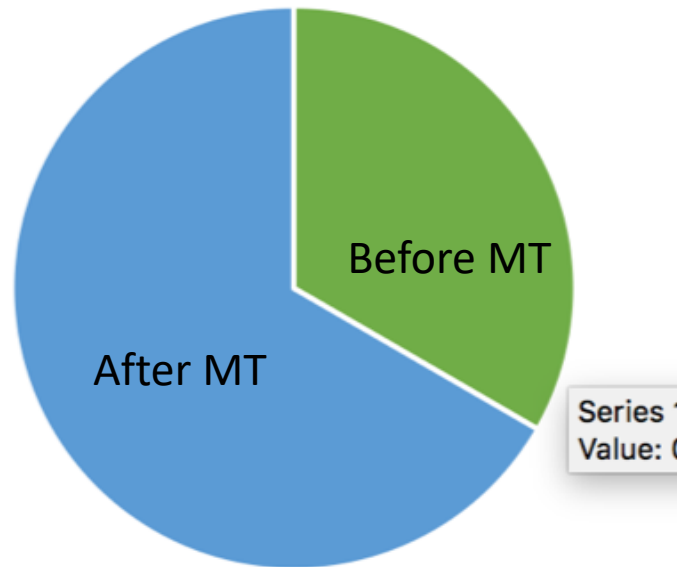
- You need to study everything.
- Topics before MT are included

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

- $\frac{1}{3}$ or less : Before MT
- $\frac{2}{3}$ 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)

Database
Administrator/
Designer
Perspective

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



"That's all Folks!"

Acknowledgement

- CS 145 offered by Stanford University
- Textbook authors
- Numerous websites
- Last but not the least

All of you



It's Exam Time!
Here's a BIG

GOOD
LUCK!

wish to you