



Introduction to Data Management

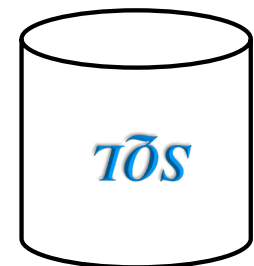
*** The “Flipped” Edition ***

Lecture #25

(Dataframes for Data Science)

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Announcements

■ Homework info:

- HW #8 (*NoSQL and Analytics*) is the last HW!
 - Due Wed, Dec 1 (or late on Thu) at 6PM



■ Thanksgiving scheduling oddities:

- *No in-person class* on Wed Nov 24 in honor of the Thanksgiving holiday (traffic, etc.)
- *No discussion sessions* this week, also due to the Thanksgiving holiday
- *No in-person class* on Mon Nov 29 due to a non-reschedulable medical appt (sorry!)



Are We There Yet?



Topic Coverage and Exam Schedule

Syllabus

Topic	Reading (Required!)
Databases and DB Systems	Ch. 1
Entity-Relationship (E-R) Data Model	Ch. 6.1-6.5, 6.8-6.9
Relational Data Model	Ch. 2.1-2.4, 3.1-3.2
E-R to Relational Translation	Ch. 6.6-6.7
Relational Design Theory	Ch. 7.1-7.4.2
Midterm Exam 1	Fri, Oct 22 (during lecture time)
Relational Algebra	Ch. 2.5-2.7
Relational Calculus	⇒ Wikipedia: Tuple relational calculus
SQL Basics (SPJ and Nested Queries)	Ch. 3.3-3.5
SQL Analytics: Aggregation, Nulls, and Outer Joins	Ch. 3.6-3.9, 4.1
Advanced SQL: Constraints, Triggers, Views, and Security	Ch. 4.2, 4.4-4.5, 4.7
Midterm Exam 2	Mon, Nov 15 (during lecture time)
Storage	Ch. 12.1-12.4, 12.6-12.7
Indexing	Ch. 14.1-14.4, 14.5
Physical DB Design	Ch. 14.6-14.7, 15.1-15.3, 15.5.3
Semistructured Data Management (<i>a.k.a.</i> NoSQL)	Ch. 8.1, ⇒ AsterixDB SQL++ Primer , ⇒ Couchbase SQL++ Book
Data Science 1: Advanced SQL Analytics	Ch. 5.5, 11.3
Data Science 2: Notebooks, Dataframes, and Python/Pandas	Lecture notes and Jupyter notebook
Basics of Transactions	Ch. 4.3, Ch. 17
Endterm Exam	Fri, Dec 3 (during lecture time)



