

Lecture 15B - Review

CS 410/510 - Databases

Logistics

- Final exam Monday at 3PM

Review

Review your midterm!

High-level things that are important:

- Data modeling
 - 3-schema model
 - Logical models with E-R diagrams
 - Enhanced ER diagrams
- Designing database tables
 - Physical translation of the logical schema
 - `CREATE TABLE` statements
 - Select data types (what types are good for things?)
 - Add indexes, foreign keys, `UNIQUE` constraints
- Querying
 - The mighty `SELECT`
 - How can we do different things?
 - Get some rows
 - Aggregate results
 - Join tables
 - Order
 - Limit
 - Subquery
 - Outer joins
 - NOT EXISTS queries
- Parameterized queries and prepared statements
 - Why do we use them?
 - How do you use them?
- Transactions
 - ACID
 - Isolation
- Scaling

- The scaling hierarchy from last time
- What is hard about multi-master replication? Distributed systems?