Final Week

Overview: Database Design

- Data models: ER, Relational Data Model and their mapping
- Relational Algebra: be able to use relational algebra to answer question.
- Database Languages: SQL, PLpgSQL (final exam: need be able to determine yes or no for SQL)
- Relational Database Design: Functional Dependency, Normal Forms, Design Algorithms for 3rd normal form and B-C normal form (3.5 normal form)
- UML (Excluded from the Final Exam)

Overview: DBMS

- Disk, Files, Buffer Replacement Policy
- Indexing Basic
- Transaction Management
  - ACID properties
  - Various schedules: Serializable, Conflict-Serializable, Schedule Graph, Wait for Graph, …
  - concurrency control (locking, time-stamp ordering) --- for multi-versioning, optimistic, only need to know the basic idea.
- Graph Processing. (We only exam the understanding of the problem definition)
- Graph Systems (Not examined)

Final Exam

10 question just answer yes or no

- 2 hrs
- Based on understanding
- **If you do not feel well on the exam day, please not attend the exam. If you attend the exam, no sup-exam will be given!**
- **Consultation: One week prior to the final exam.**
- **Sample questions will be out soon. Please note that sample questions just reflect the difficult degree but not the scope nor the similarity.**