F24/EECS 484: Database Management Systems

Instructors:

Prof. H V Jagadish

Prof. Lin Ma

Course Resources

Find course schedule and links to other resources, including course policies on collaboration (honor code) and grading in Course Policies, available on Canvas.

Course Outline – EECS 484

- GOAL: Basic introduction to database management systems.
- Two perspectives:
  - External (*Database user*)
    - Data models, ER model, relational model, SQL, database design …
    - Java/JDBC Project: Common platform for building database applications
  - Internal (*Database implementer*)
    - File organizations, access methods, sorting, concurrency control, recovery, …
    - 2 projects, including a MongoDB project
- Textbook "Database Management Systems", by Raghu Ramakrishnan & Johannes Gehrke. 3rd ed.
  - Textbook is required.
  - Weekly reading ~50 pp. You will not regret it.

Embedding SQL in a programming language

- Databases are most often accessed via a declarative query langage, SQL.
- SQL is usually embedded in, and called from, a traditional (procedural) programming language.
- Java is a common choice, and so you will be using that in a project.

Groups

- Four projects + five homeworks
- Project in groups of size 2.
  - Teamwork is an important goal of CS/DS education.
- Start looking for partners now!
- If you don't find a partner, you will be assigned one.
- If you have a good reason to work alone, request an exception by email.

Project Grading

- Mostly autograder, some human.
- Limited number of submissions, even for autograded portion.
  - Make sure to test extensively.
- Both partners are expected to contribute to and be familiar with all aspects of the project.

Discussion Sections

- Not optional!
- Project and homework discussion.
- Discussions sometimes run ahead of lectures or cover additional relevant topics
- Fridays is deadline for most homeworks (except HW3). Complete the homework by Thursday. OK to use the Friday discussion to get some feedback from the TA on your approach prior to submission

Honor Code – Course Policies

- CoE Honor Code for all students
- Key principle: No unfair advantage
- Your work must be original – no peeking at old solutions, sharing of code, or discussing the projects beyond your group, but discussions across groups on the approach without sharing code is OK. You may search places like slashdot, but not ask UMGPT for help with coding.
- **No public posting of solutions**, e.g., even after the course.
- **Private repos** to share with your partner or a potential employer are OK.
- Posting public questions on Piazza or using office hours for help is fine.
- Use office hours for other questions.
- Also see Canvas for link to CoE Honor Code.

This week

- No discussions this week
  - The regular schedule for discussion starts next week.
- Office hours start Thursday this week.
  - Note that they are a mix of in-person and online.

Lectures

- Lecture notes posted on the Syllabus page.
- Sometimes updated after the lecture.
  - To fix errors
  - To add clarifications