General Information

- **Instructor:** Amr El Abbadi
- Office: 3115 Engineering I
- Office hours: TR 11-12.
- **Teaching Assistants:** Sudipto Das

Textbook


Recommended readings


Course Description

This course covers the fundamental concepts, principles and techniques for the design and use of database management systems. The course work includes both homework exercises and a project. The topics include data models, including entity relationship model and the relational (record-based) model; relational query languages, including relational algebra and calculus, SQL and Query-By-Example; database integrity constraints; schema refinement and normal forms; as well as potentially other more advance and state-of-the-art topics.

Prerequisites:

Computer Science 130A.

Policies and Quizes

- The course grade will be based on the homework assignments, project, one mid-term and a final.
- The mid-term will take place in class on Feb 7.
- The final will take place in class on March 19, 8am.
• **Late turnins** will be penalized: 5% of the points will be deducted for each working day the assignment was late with a maximum of 5 working days, after that the assignment is not accepted.

• Cheating will not be tolerated. This includes copying (parts of) answers or programs in homework, project or exam. Persons caught cheating will receive a grade of F in the course and a report will be filed to the Office of Student Services.

• Grades will be computed approximately as follows: homeworks and project: 50%, mid-term 20% and the final 30%.

**Course Outline**

1. Introduction
2. The relational data model: general concepts
3. Relational algebra
4. Relational Calculus
5. SQL Queries
6. DDL, integrity constraints, updates, views in SQL
7. Query-By-Example
8. Conceptual database design: ER model
9. Conceptual database design: Normalization
10. Advanced Topics.