Both owned by Larry Ellison, CEO of Oracle
It pays to know databases!
Course: CMSC 424 – Database design
Instructor: Mihai Pop
Times: TuTh 11:30-12:15
Location: CSIC 1121

Textbook: Database systems concepts. Silberschatz, Korth, Sudarshan

Sailboats and databases seem to go hand in hand ...
What you will learn

• Models for data representation – Entity-relationship, relational
• SQL (structured query language) – language for interacting with databases
• Schema normalization – how to represent data efficiently
• Data storage – how databases store data on a disk
• Query processing and optimization – how a database decides how to most efficiently answer a query
• Transactions, concurrency and recovery – how databases deal with multiple users and with failures
• Parallel/distributed databases
• Databases on the web
Workload

• Exams: 2 midterms, 1 final
• Projects: 1 group programming project - build a database that does something cool (TBA)
• Homeworks: ~4 homeworks throughout the semester (some include SQL programming)

• Grading:
  – homeworks 10%
  – midterms 25%
  – final 25%
  – project 40%

• Attendance and academic honesty policies follow university guidelines:
  – absences must be justified in writing (e.g. doctor's note)
  – no excuses will be accepted for cheating
Why go through all this?

- Database administrators are paid well
- Databases are everywhere (i.e. lots of job opportunities)
  - E.g. Google
  - at the doctor's office
  - payroll systems
  - on Wall Street
  - government (e.g. CIA)
  - scientific data
- Database research offers many exciting opportunities
  - Internet technologies
  - handling huge amounts of data
  - etc.