* Raghu Ramakrishnan and Johannes Gehrke Database Management Systems McGraw-Hill 3rd Edition 2002
* Office Hours
  + Kollios
    - MCS 283
      * Mon 2:30-4PM
      * Tues: 1-2:30PM
  + Mona Jalal
    - EMA 309
      * Tue/Thur 2-3:15pm
      * Fri 10:15-11:45AM
* Database
  + a very large collection (of files) of related data
    - i.e. accounts in a bank, BU’s students database, etc
  + Models a real world enterprise:
    - Entities (e.g., teams, games / students, courses)
    - Relationships (e.g., student takes CS460)
    - Even active components (e.g. “business logic”)
* Data Base Management System (DBMS)
  + software package/system that can be used to store, manage and retrieve data from databases that persist for long periods of time
  + Examples: Oracle, IBM DB2, MS SQLServer, MySQL, PostgreSQL, SQLite
  + Databse System: DMBS + data (+ applications)
* Data Organization
  + Data Models: framework for describing
    - data, data relationships, data semantics, data constraints
  + Relational Model
    - table format
      * row
      * column (attributes)
  + Data Storage
    - Main memory, secondary memory (hard disks), optical storage (DVDs), tertiary store (tapes)
    - buffer manager
      * move data
    - file manager
      * mapping data to files
  + Data Retrieval
    - Queries
      * Query = Declarative data retrieval
        + describes **what** data, not **how** to retrieve it
* SQL
  + SQL: widely used (declarative) non-procedural language