

# Lecture1

Monday, April 1, 2019

1:49 PM

- Database: a collection of files storing related data.  
eg. Accouts database; UW students
- Database Management System(DBMS)
  - Definition: a program written by someone else that allow us to manage efficiently a large db and allows it to persist over long periods of time
  - Relational DBMS
  - Eg., Oracle, IBM DB2, MS SQL server; Open source: MySQL, PostgreSQL, CouchDB; Open source lib: SQLite
- What a DBMS Does
  - Describe real-world entities
  - Store large datasets persistently
  - Query & update efficiently
  - Change structure
  - Handle concurrent updates
  - Crash recovery
  - Security and integrity
- Key Players:
  - DB application developer: write programs that query and modify data(414)
  - DB designer: establishes schema(414)
  - DB administrator: loads data, tunes system, keeps whole thing running(414, 444)
  - Data analyst: data mining and integration(414, 446)
  - DBMS implementor: builds the DBMS(444)

