1 Administrivia

Announcements

We won’t explicitly cover 5.5–7 in class. As with other assigned reading, you’re responsible.

Assignment

Read 6.1.

From Last Time

Intro to E/R methodology.

Outline

1. E/R design example.

Coming Up

Relational algebra.
2 E/R Design Example

1. Domain description:

   We want to design a mailing list server, to support any number of mailing lists. Each list has one owner (the list administrator). Only the owner may designate “senders” — those who are allowed to post messages to the list. The owner may or may not be a sender. Owner and senders must also be readers. For each list, there may be an unlimited number of senders. Anyone may subscribe to any list as a reader. They may also unsubscribe themselves. Assume that everything is web-based. Messages are retained for an amount of time specific to each list and consist of a subject and text. Messages should indicate sender. E-mail addresses and passwords are used for authentication purposes. Passwords may be list-specific. Because everything is web-based, e-mail is not used to send messages, ordinarily. E-mail may be used for private communication between a list owner and a reader of that list. There are no limitations as to how many lists a user may own or how many lists a user may send to. Lists have names and descriptions and exist for a fixed amount of time.

   Allocate ten minutes for each of the following activities.

2. The entities:

   (a) Users.

   (b) Lists.

   (c) Messages.

   What are the attributes?

3. The relationships:

   (a) Administers.

   (b) SendsTo.

   (c) Reads.
(d) SentBy/To.

What are the attributes and roles?

4. The constraints: What are they here?

5. Design E/R diagrams and determine constraints.

6. Implement as a relational schema.