Introduction and Background

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1   Administrivia

Announcements

Assignment

Read 3.1–3.8

From Last Time

There was a last time?

Outline

1. Textbook material overview

2. Semester project overview.

3. LAMP stack.

4. Question set 1.

Coming Up

The entity-relationship model, part 1.

2   Textbook Material

1. Chapters 1 and 2: Introduction

2. Chapter 3: Entity-Relationship model

   (a) Entities: Student, Class

   (b) Attributes: ID, Name

   (c) Relationships: EnrolledIn

3. Chapter 4: Relational model

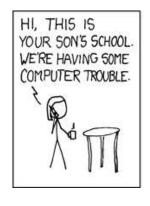   (a) Data modeled as relations (mapping from one set to another); set theory

   (b) Implemented as tables — rows are *tuples*; columns are *attributes*
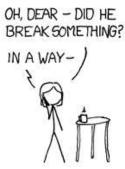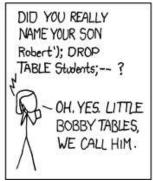
4. Chapter 5: Relational databases and SQL

5. Chapter 6: Normalization

   Aim is to ensure that we have a "good" model of the data; eliminate/reduce redundancies, ensure consistency.

6. Chapter 9: Transactions

7. Chapter 8: Security (a few sections)

8. Chapter 13: Optimization (may skip)

   Computational effort in query execution.

9. Chapters 10, 11, and 12: "Big Data" (a few topics, as time permits; senior project ideas?)

   New to me...

3   Semester Project

1. Review the handout.

2. Labs: SQL, php.

4   LAMP Stack