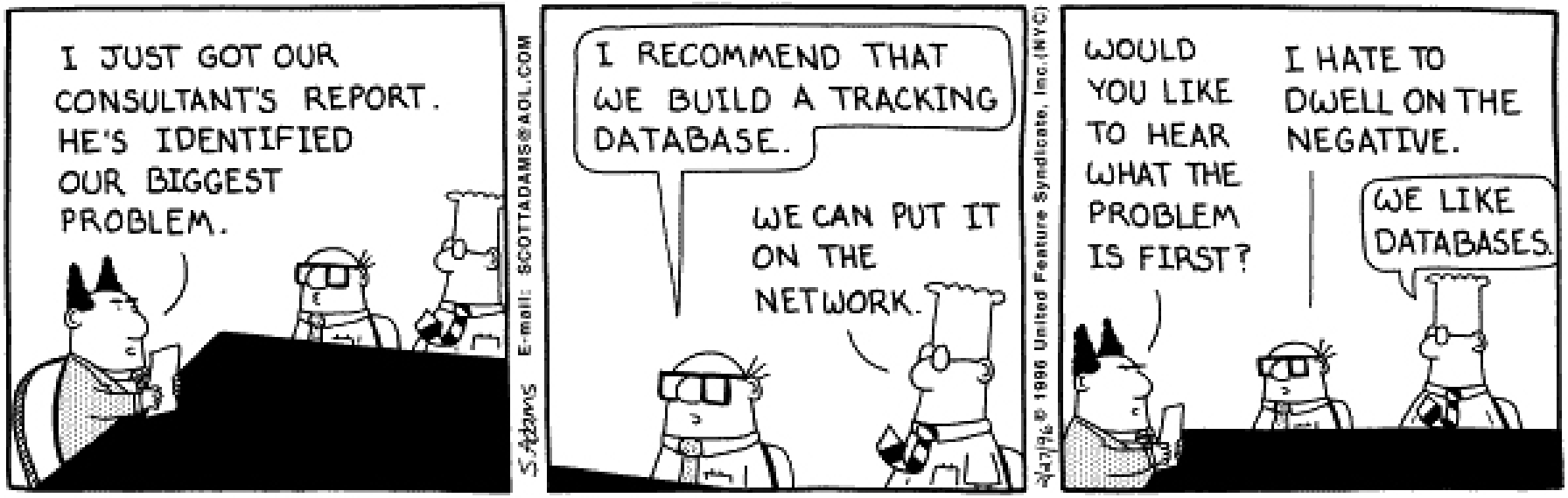
Introduction to Databases

Spring 2024

Cheriton School of Computer Science

CS 348: Intro to Database Management

Introduction to Dtabases



This course is designed primarily to meet the needs of students who are interested in using database technology in sysem development.

The course presents methods used for the storage, retrieval, and organization of data.

Topics

1. Why do we use databases?

   $\Rightarrow$ Functionality provided by a Database Management System

2. How do we use a Database Management System?

   $\Rightarrow$ Relational model

   $\Rightarrow$ Foundational query languages and SQL

   $\Rightarrow$ Transactions, concurrency, and recovery

3. How do we design a database?

   $\Rightarrow$ Entity-Relationship (ER) modeling

   $\Rightarrow$ Accommodating and enforcing constraints

Organization

- Lectures:

```
LEC 001    11:30-12:50TTh   MC 2017   David Toman
LEC 004    02:30-03:50TTh   MC 2034   David Toman
```

- Class web site:

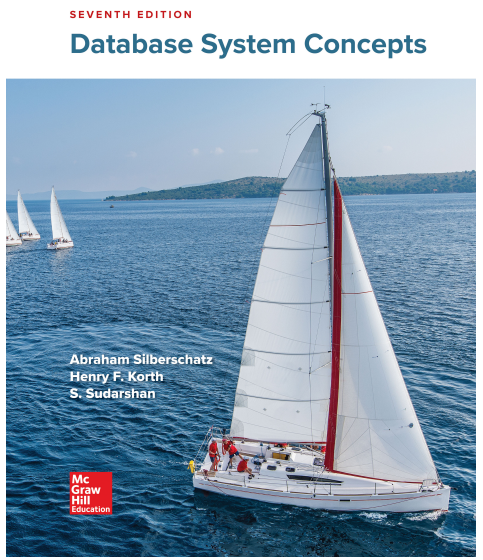
  ⇒ `cs.uwaterloo.ca/~david/cs348/`

  syllabus, schedule of classes, policies, etc.

- Textbook:

  Database System Concepts, 7th edition,
  Silberschatz, Korth, and Sudarshan (required)

  Database Management Systems, 3rd ed.,
  Ramakrishnan & Gehrke, (optional)



Assignments

- Five assignments throughout term

  $\Rightarrow$ Sample solutions released on *due date*

- Goal is to give you practice with material

  $\Rightarrow$ You can seek help from TAs.

- You will have more trouble learning the material (and passing the course) if you do not attempt the assignments

Getting Help

1. Piazza
2. Instructor and TA office hours

   $\Rightarrow$ See the web site

Evaluation/Assessment

1. Assignments: 30%
2. Midterm exam: 30%
3. Final exam: 40%

Summary

- Look at Web site:
  - $\Rightarrow$ course schedule and all slides.
  - $\Rightarrow$ all relevant information and announcements
- Material build on itself (like most other courses in Math)
  - $\Rightarrow$ Initial lectures: terminology and background knowledge
  - $\Rightarrow$ May be an *overwhelming amount of details*
- **Don't fall behind!**

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