An announcement of Fall '00

Topics in Data Bases

graduate class/seminar (CS748M)

by

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Topics

- How to store info about Space and Time?

  $\Rightarrow$ so it fits? ... and so we can query/update it?

- How much do we really need to remember anyway?

  $\Rightarrow$ and how do we find what to forget?

- What if our data is incomplete/inconsistent?

  $\Rightarrow$ approximate query answering

- Integrity constraints

  $\Rightarrow$ there's more to it than FDs and BCNF/3NF!

- ...

Goals, Format, and Prerequisites

Goal

discuss advanced aspects of databases management with focus on query languages, non-traditional data types, etc.

Format

seminar with few formal lectures,
usually a short presentation followed by discussion

Prerequisites:

elementary math (logic and model theory), basic complexity, and standard programming skills.

Main goal: say what I do or did and start collaboration/projects with students here at UW.

planning 1-2 longer meetings a week, rather than the usual 3x1 schedule.

NOTE: this is *not* an “Introduction to Databases” course.

Assessment

Project: (70%)

- pick a project: an *in-depth paper*, a *breadth survey*, or an *implementation project*.
- prepare a proposal: a written description (1 page)
- work on your project.
- prepare a final report *and* a presentation (20-30").

Readings and Class preparation: (30%)

- assigned reading
- solutions to problems from the last session

I will suggest several topics for projects in one of the first classes. However, I'd appreciate you taking initiative in finding your own topic.

The proposal will be discussed in class and the agreed on result will be your contract for passing the class.

For an implementation project you'll need to show test cases, example runs, and/or live demo).

You may form groups if you wish (but I won't arbitrate disputed later).

Projects (samples)

Theory

- Closure properties of constraint representations
- Termination of constraint extensions of Datalog
- Queries over compressed histories
  and retroactive updates
- Query compilation for embedded controllers

Implementation

- Expiration of data warehouse histories (DB2)
- Query compilation for embedded controllers
- Constraints in XSB (C)

Organizational Meeting

More Info

Org. Meeting: ICR Board Room DC 1331
Sept. 11, 2000, 2:30p.m.

Office: DC 3128, x4777, `david@uwaterloo.ca`

On-line Info: `http://db.uwaterloo.ca/~david/classes/dbtopics-fall00`

Looking for students

for projects (even if you're not taking the class)