

**Principles of Information and
Database Management
198:336**

Week 7 – Mar 21

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Project Overview

Three phases

- Project Design
- Database implementation
- Web interface

Project Overview

Timeline – two week increments

- For the rest of the semester

Design – due April 4 – 2 weeks from today

Databases – due April 18

Interface – due May 2 (last day of class)

Outline in More Detail

Design

- Form teams of two
(or maybe one or maybe three)
- Find an application topic
(either a sports team management OR something personally important to you)
- Map out some application scenarios
(illustrate what you want to do through specific examples)

Outline in More Detail

Database implementation

- Build ER diagram
- Write SQL code to create database
- Formulate, test and debug queries that will allow your application to carry out example scenarios

Outline in More Detail

Web interface

- Write code to access the database and show the results over the web
- Using
Java serverlets and html or
Java server pages or
PHP...

Conceptual Roadmap

Suppose you have this interface:



Search by author

Conceptual Roadmap

That corresponds to a browser program

- It says you have a form to fill out
- It gives another page on the server
- When the form is filled out,
that page gets called with the new data

A few lines of HTML

- We'll see more of this next week.

Conceptual Roadmap

You now have a request

- Do a search by author, with author “rowling”
- This is implemented by
 - connecting to a DBMS
 - posing an SQL request
 - visualizing the results

For example

Here you want to:

- Open a connection to the books database
- Construct a query
 - `select * from books where author=rowling`
 - This is partly prewritten
 - `select * from books where author = ?`
 - And partly assembled based on form data
- Explore the resulting table

Conceptual Roadmap

Finally, visualizing the table means

- Looping over the returned results
- Formatting a display in HTML
 - Laying things out in a table
 - Describing individual elements
 - Adding links to additional scripts

So you get something like this

Search by author

Rowling

[Harry Potter and the Sorcerer's Stone](#)

[Buy it now](#)

[See similar titles](#)

[Harry Potter and the Goblet of Fire](#)

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