Course Description

This course educates students about the principles, techniques and software tools of Designing and implementing bibliographic databases. These issues are approached from the perspective of librarians and information specialists rather than from that of computer scientists. Accordingly, textual information management software products are demonstrated and used rather mainstream, relational database management software packages. Beyond bibliographic databases the course also discusses the issues related to full-text, page-image, and directory types of databases. The course is meant to prepare librarians and information specialists for designing the content and structure of textual databases, and for evaluating and deploying textual information management software in such endeavors. This course does not discuss database publishing on the Web and/or CD-ROM that is the topic of another course.

Prerequisite: LIS 670 Information Storage and Retrieval

LIS Program Learning Objectives

1. understand the theories and processes for selecting and organizing information sources;
2. understand the theories and processes for the retrieval, dissemination, and utilization of information sources;
3. attain basic competencies and knowledge that are essential for providing, managing and designing information services in a variety of information environments;
4. attain basic competency in the latest and specialized information technologies;
5. understand the above objectives within the perspective of prevailing technologies.

Course Learning Objectives

On completing the course the student should be able to:

1. design and implement textual databases;
2. develop critical evaluation techniques of textual databases information management software;
3. get acquainted with the basics of a bibliography formatting software with limited database building and search capabilities;
4. attain competency in using one of the most sophisticated textual information management software, DB/Textworks;
5. qualify for positions that require designing and implementing textual databases in libraries; information centers and other organizations providing information services.

Teaching Method

The course applies a combination of lectures, students' exercises and facilitated class-room discussions on various aspects of textual database design. The exercises require students to work in groups and on their own to explore the capabilities of the software, relying on class-room discussions, demonstrations, readings and the comprehensive user guide built in the software. Class-room presentations allow students to share their experience and get reaction from the entire class.
Requirements

Textbook:

The print and electronic User's manual of DB/Textworks is the most essential "reading item" in addition to those available in the digital carrel at http://www2.hawaii.edu/~jacso/courses.htm

Assignments and Grading

Active class participation, a mini-bibliography, a pilot database, and a final database with a user manual (as a term project) are required. Course grades will be based on demonstrating the mastering of the design principles, the use of the software, and the quality of the documentation.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage of Grade</th>
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<tbody>
<tr>
<td>Mini-bibliography</td>
<td>30%</td>
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<tr>
<td>Implementation of a pilot database</td>
<td>40%</td>
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<tr>
<td>Finalized database and user guide</td>
<td>30%</td>
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(1) mini-bibliography (30% of the grade)

This assignment is to be done in groups of 3 students. Each group must prepare a mini bibliography of about a dozen items selected from the reading list. Student will have to use the demo version of one of the three bibliography formatting programs to be assigned to them (ProCite, EndNote, Reference manager), and make an oral presentation demonstrating the pros and cons of the software as a searchable database and a bibliography generator.

(2) Implementation of a pilot database (40% of the grade)

Students have to design a pilot abstracting/indexing database (with option for full-text) of articles published in the journal Social Process in Hawaii, using the demo version of DB/Textworks software. This assignment is to be done in group based on the consensus reached classroom discussions about the content and format of the master file, the index file, the query screen and the output formats. The pilot version with a few records must demonstrate that the student mastered the advance features of the software, such as handling repeatable (multi-value) fields, defining efficient data entry screens, using look-up and substitution fields, creating field-specific and merged indexes, a few visually appealing output formats, and intuitive query screen.

Guidelines will be distributed and discussed in class.

(3) Final database and user guide (30% of the grade)

The pilot database will have to be revised based on input from fellow students and the professor. It also has to be expanded to include about 15 records per students. The final version and a manual explaining and illustrating the data entry and retrieval procedure and results is to be prepared by each student. Further guidelines will be provided.

Technology & Attitude Requirements

Familiarity with the essential functions of MS Windows, FTP, and the Web is expected to download, install and use the trial version of the programs. Students are expected to have access to their own computers at home or at work with installation privileges. Continuous back-up of students' files onto floppies in two copies is a must. Assignments and the term paper documentation must be prepared using a word processing software.

It is to be understood that learning a software and implementing a database is often a frustrating experiment and failures are inevitable. The time required to achieve the desired results may vary enormously. To maintain fairness, software-related questions will be answered only in the class-room where all students can benefit from the answer. It is expected that students thoroughly check the software guide, and experiment with solutions before they demonstrate the problem and the solutions they tried to apply. No help can be provided to solve problems related to the configuration of the student's computer that cannot be reproduced in the class-room. This "tough love" attitude is part of preparing students for the job in the trenches where self-study and experimentation is a must before asking for outside help.
Course Schedule

Session 1.  Course introduction and overview
  - Overview
  - What databases librarians build
  - Formation of groups

Session 2.  Database content and quality
  - Scope and coverage
  - Currency and retrospection
  - Valued-added information
  - Indexing and abstracting quality

Session 3.  Database planning
  - Feasibility, study
  - Editorial decisions
  - Software options

Session 4.  Editorial decisions
  - The mini-bibliography project
  - Content decisions
  - Structural decisions

Session 5.  The National Parks Database
  Guest Speaker: dona Bair-Mundy

Session 6.  Data definitions
  Data entry and indexing

Session 7.  Index Browsing and Searching
  - Choice of searchable fields
  - Index types and browsing
  - Term selection
  - Truncation, masking, Boolean operations
  - Field qualification, proximity searching

Session 8.  Sorting and output capabilities
  - Record definition and field specification
  - Template design
  - Importing records

Session 9.  Group Presentations – Mini - Bibliography

Session 10.  The SpiH Database
  - Database and record structure
  - Importing records from sociological abs

Session 11.  The SpiH Database
  - Indexing and search options

Session 12.  The SpiH Database
  - sort and output options

Session 13.  Creating Library Technical Service Databases
  - types of databases
  - software tools
  - MARC records
  Guest Speaker: Dr. Larry Osborne

Session 14.  Group Presentations – Pilot Database
Session 15. Interface and Documentation

- Interface types and levels
- Ergonomics
- Documentation and help files

Session 16. Future Options