MIS 325: Database Design and Implementation
Fall 2009

Room: UTC 1.130
Time: MW 9:30 to 10:45   MW 11:00 to 12:15
Unique: 03840   03845

John Mote

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Teaching Assistants

Office: CBA 5.226
Garrett: hours to be announced
Patrick: hours to be announced

Course Objectives

Database management systems form the backbone of virtually every modern corporate information system. The database supports the organization's highly structured, operational activities (e.g., inventory, sales, marketing, personnel) as well as the ad hoc, strategic managerial analysis of complex business decision problems (e.g., new product introduction, plant expansion, off-shoring, downsizing, stock offerings). Without a well designed and intelligently implemented database, the organization will have a difficult time remaining competitive in the marketplace.

This course provides a balanced introduction to the design and implementation of corporate database management systems. We will examine effective strategies and techniques for modeling typical corporate data collection, retrieval and analysis problems. By understanding the information needs and data flows within an organization, we can create a database solution that best serves our users. The design skills we master in this course are universal. That is, the same basic modeling skills are needed whether we are designing a database for a single-user, pc-based environment or for a thousand-user, client-server, distributed environment.

Given a database design, and the corresponding hardware and network environment, the next crucial step of the process is the implementation phase (including verification). We will use Microsoft SQL Server as our primary vehicle for mastering the database implementation process. We will also use ASP (Active Server Pages) for the user-interface component of web-based databases.

Given a basic design and implementation, the final step of the process is the ongoing monitoring and revision of the database management system as the organization, the users and the database itself evolve over time. Clearly, this step never ends.

Recommended Textbook

Murach's SQL Server 2008 for Developers
Bryan Syverson and Joel Murach
Murach Books, 2008
ISBN-13: 978-1-890774-51-6
http://www.murach.com

Supplemental Readings

Additional readings will be provided throughout the semester to provide background and to help fill gaps in the lectures.

Software

You do not need to purchase any software for this class. Everything is available on the computers in the Mod and Millennium Labs. You may also download the software (Visio Pro and SQL Server) at no cost to your own Windows computer. Installation instructions will be provided during the semester.

Class Web

All of the class material (slides, assignments, sample databases and ASP applications, FAQs, grades, etc) can be found at:

http://www.utexas.edu/courses/mis325

Teaching Assistants

The TAs will help students with software training and homework assignments. They will also grade some of the assignments, but they will not grade the exams.

Attendance

Roll is never taken, but attendance is strongly encouraged. No credit will be given for missed quizzes or in-class assignments.

Grading

Assignments & Quizzes	40 percent
September 30th Exam	20 percent
October 28th Exam	20 percent
December 2nd Exam	20 percent

Assignments

All assignments will be posted on the web. Most assignments will be turned in electronically. Late assignments will be penalized twenty percent per calendar day (not class day) up to the time when the graded assignments are returned to the class. In order to be fair to the other students in the class, late assignments cannot be accepted after that point.

Quizzes

A few unannounced quizzes may be given during the semester. They will count as minor homework assignments.

Exam Format

The first exam will be held in the classroom. It will be closed book.

The second and third exams will be held in the Mod Lab. They will be open book, open note, open web. You must verify that you are able to logon to the lab computers prior to the exams. If you cannot logon, then speak to the staff in the Millennium Lab.

Sample exams will be distributed prior to each exam.

Re-grades

Occasionally, assignments and exams are graded incorrectly. All requests for re-grades must be submitted within one week of the date the graded item is returned to the class.

Students with Disabilities

The University of Texas provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Prerequisites

There are no formal prerequisites for MIS 325. Some students do, however, know a procedural programming language like Visual Basic. Some are learning VB this semester in MIS 304. Quite a few students know quite a bit about web programming (HTML, CSS, JavaScript). A handful know a little bit about SQL, but very few have an indepth knowledge of the language. To repeat: There are no prereqs for this class. You will be taught everything you need to know about VB, HTML, SQL and all of the other acronym languages.

Tentative Schedule

Revisions to the schedule (as well as suggested readings, assignments, handouts, etc) will be announced in class and posted on the web.

Date	Topic
August 26th (Wed)	Course Introduction
August 31st (Mon)	Basic Database Concepts (Part 1)
September 2nd (Wed)	Basic Database Concepts (Part 2)
September 9th (Wed)	Database Models & ER Diagrams (Part 1)
September 14th (Mon)	Database Models & ER Diagrams (Part 2)
September 16th (Wed)	Normalization (Part 1)
September 21st (Mon)	Normalization (Part 2)
September 23rd (Wed)	SQL Introduction
September 28th (Mon)	SQL Server (in Mod Lab)
September 30th (Wed)	**Exam One**
October 5th (Mon)	Data Definition Language
October 7th (Wed)	Select (Part 1: Basics)
October 12th (Mon)	Select (Part 2: Basics and Aggregation)
October 14th (Wed)	Select (Part 3: More Aggregation)
October 19th (Mon)	Select (Part 4: Joins)
October 21st (Wed)	Select (Part 5: Special Cases)
October 26th (Mon)	Action Commands
October 28th (Wed)	**Exam Two** (in Mod Lab)
November 2nd (Mon)	HTML Review
November 4th (Wed)	ASP (Part 1: Introduction)
November 9th (Mon)	ASP (Part 2: Basics)
November 11th (Wed)	ASP (Part 3: Select)
November 16th (Mon)	ASP (Part 4: More Select)
November 18th (Wed)	ASP (Part 5: Insert)
November 23rd (Mon)	ASP (Part 6: Delete and Update)
November 30th (Wed)	ASP (Part 7: Odds & Ends)
December 2nd (Wed)	**Exam Three** (in Mod Lab)