

MIS 325: Database Design and Implementation

Spring 2007

Room: UTC 1.130
Time: MW 9:30 to 10:45 MW 11:00 to 12:15
Unique: 03635 03640

John Mote

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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 Textbooks

Beginning Database Design

Gavin Powell
Wrox/Wiley, 2006
0-7645-7490-6

Microsoft SQL Server 2005: A Beginner's Guide

Dusan Petkovic
Osborne/McGraw-Hill, 2006
0-07-226093-9

Software

You will not need to purchase any software for this class. Everything is available on the computers in the Mod and Millennium Labs. You can also install our software (Visio Pro and SQL Server 2005) at no cost on your home computer from:

<https://www.mcombs.utexas.edu/services/cbacc/coe/>

Class Web

MIS 325 does not make use of Blackboard. 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 hold office hours in CBA 5.226. Their hours will be announced once their own class schedules are stable. The TAs will help students with software training and homework assignments. They will also grade some of the assignments. They will not grade the exams.

Attendance

Roll will not be taken, but attendance is strongly encouraged. No credit will be given for missed quizzes or in-class assignments.

Grading

Assignments & Quizzes	40 percent
February 19th Exam	20 percent
March 28th Exam	20 percent
April 30th 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 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.

Tentative Schedule

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

Date	Topic
January 17th (Wed)	Course Introduction
January 22nd (Mon)	Database Concepts (Part 1)
January 24th (Wed)	Database Concepts (Part 2)
January 29th (Mon)	Database Models & ER Diagrams (Part 1)
January 31st (Wed)	Database Models & ER Diagrams (Part 2)
February 5th (Mon)	Normalization (Part 1)
February 7th (Wed)	Normalization (Part 2)
February 12th (Mon)	SQL DDL Overview
February 14th (Wed)	Microsoft SQL Server - DDL
February 19th (Mon)	Exam One
February 21st (Wed)	SQL DML Overview
February 26th (Mon)	Microsoft SQL Server - DML
February 28th (Wed)	Select (Part 1: Basics)
March 5th (Mon)	Select (Part 2: Aggregation)
March 7th (Wed)	Select (Part 3: Joins)
March 19th (Mon)	Select (Part 4: Special Cases)
March 21st (Wed)	Action Commands
March 26th (Mon)	Wrap Up & Review
March 28th (Wed)	Exam Two (Mod Lab)
April 2nd (Mon)	HTML (Getting Started)
April 4th (Wed)	ASP (Part 1: Basics)
April 9th (Mon)	ASP (Part 2: Select)
April 11th (Wed)	ASP (Part 3: Insert)
April 16th (Mon)	ASP (Part 4: Delete)
April 18th (Wed)	ASP (Part 5: Update)
April 23rd (Mon)	ASP (Part 6: Odds & Ends)
April 25th (Wed)	Wrap Up & Review
April 30th (Mon)	Exam Three (Mod Lab)