

Database Systems Lecture 1

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1 Syllabus

- HW(4) 10%, Projects(2) 25%, SQL Assignments(2) 10%, Attendance 5%, Midterm 20%, Final 30%
- Exams will be 40% FRQ, 60% MCQ
- Exams at testing center. Midterm **Oct 8th**
- Attendance is mandatory

2 Chapter 1

What is a database?

- Means of persisting data & non-volatile memory. Persists between RAM cycles. Stored in disk space rather than RAM
- Has information about entities, their attributes, and their relationship to other entities
- Relational databases allow the maintenance of relationships between database entities
- Problem domain may be called **Business Domain or Universe of Discourse**

What is a Database Management System?

- DBMS is a server or application that acts as an interface to the database
- Provides services used to **CRUD** entity instances
- DBMS' provide services to one or more clients. Can maintain more than one database
- Provides languages and tools used to define the structure of entities (schema) and interact with them
- Protects databases from data corruption using built-in rules or through some sort of interface-level sanitization
- **Data Definition Language (DDL)** is used to describe entities
- Entities are defined by attributes, and entities maintain associations with other entities

MATTHEW IS RIGHT THIS MAN MAKES ANY TOPIC THE MOST BORING, BOILERPLATE TOPIC IN THE UNIVERSE