

**You are responsible for all the material we covered so far:**

**Format for Midterm Exam:**

1. Multiple Choice Questions on Database topics
2. Multiple Choice Questions on SQL
3. Writing SQL code
4. Long answer question on a Database topic

**Terminology for Midterm Exam**

**Introduction**

Manual File System  
File-Based System  
Database  
Metadata  
Entity  
Attributes  
Database Management System (DBMS)  
Application Program  
SQL  
Views  
Database Administrator (DBA)

UPDATE  
DELETE  
WHERE  
DISTINCT  
ORDER BY  
DATE  
DATETIME  
TIMESTAMP

**SQL Continued**

Aggregate Functions (COUNT, SUM, AVG, MIN, MAX)  
GROUP BY  
HAVING  
Subqueries  
Joining Tables  
Left Outer Join  
Right Outer Join  
UNION

**Database Environment**

Three Level Architecture (External, Conceptual and Internal)  
Logical Data Independence  
Physical Data Independence  
Data Definition Language (DDL)  
Data Manipulation Language (DML)  
Data Model  
Relational Data Model  
Network Data Model  
Hierarchical Data Model  
Teleprocessing  
File-Server Architecture  
Traditional two-tier client-server architecture  
Three-Tier Client-Server Architecture

**Relational Model**

Relation  
Tuple  
Candidate Key / Primary Key / Alternate Key / Foreign Key  
VARCHAR  
DECIMAL  
INTEGER  
Precision  
Scale  
NULL  
Required Data  
Entity Integrity  
Referential Integrity  
ALTER TABLE

**SQL Basics**

MySQL  
CREATE TABLE  
DROP TABLE  
INSERT  
SELECT

**Views and More**

CREATE SCHEMA/DATABASE

DROP SCHEMA/DATABASE

CREATE VIEW

Horizontal or Vertical Views

DROP VIEW

View Resolution

View Materialization

Commit and Rollback Transactions

GRANT

REVOKE

INDEX

Stored Procedures – create and call them

**Database Development Lifecycle /****Fact-Finding Techniques**

Information Systems Lifecycle

Database Planning

System Definition

Requirements Collection and Analysis

Database Design

DBMS Selection

Application Design

Prototyping

Implementation

Data Conversion and Loading

Testing

Operational Maintenance

Fact-Finding Techniques