San José State University
Computer Science Department
CS 157-A, Introduction to Database Management Systems, Spring 2020

Course and Contact Information

Instructor:	Harman Gill
Office Location:	DH 282
Telephone	(408) 924-7171
Email:	harmandeep.gill@sjsu.edu
Office Hours	M W 11:00 AM 11:55 AM
Class Days/Time:	M W 12:00 PM 1:15 PM
Classroom	SH100
Prerequisites:	CS 146 Data Structures and Algorithms with grade of C or better.

Course Description

Current, classical database systems. Entity-relationship and enhanced entity models. Relational model, algebra, calculus. Current, emerging SQL standard. Embedded, Dynamic SQL. Application perspective on transactions and security. Interactive and programmatic interfaces to database systems. Application programming project using commercial database system. Prerequisite: CS 146 (with a grade of "C" or better); Computer Science, Applied and Computational Math, or Software Engineering majors only; or instructor consent.

Canvas Course Site

Course materials such as syllabus, textbook, assignments, questions of the week and exams can be found on Canvas Leaning Management System course web site at http://sjsu.instructure.com. You are responsible for regularly checking with Canvas to learn of any updates.

Course Goals

1. To introduce students to the purpose of Database systems and databases, as well as common users o systems.
2. To teach students about the relational model and relation algebra.
3. To teach students about QL, the standard language for interacting with a database.
4. To teach students about design theory (such as normalization, etc.) and algorithms that help determine given database's tables are organized in a reasonable way.
5. To teach students about real-world database system usage, architectures and components. Some exampl systems that might be considered are: MySQL, Postgres, and SQLite.
6. To teach students about SQL, the standard language for interacting with a database.
7. To teach students how to interact with a database system from a programming language such as Java and Python.

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

Write relational algebra queries and predict given a databaso9 Tf 1 0 0818eiveTJ ET Q EMC /P <</

Grading Information

Homework	15%
Quiz	15%
Midterm 1& 2	30%
Project	10%
Final Exam	20%
Class Participation	10%

Determination of Grades

Percentage	Grade

No makeup Midterms/ Final Exam and no late assignments will be accepted.

grade
University Policy F13

13	4/20	BCNF
13	4/22	Third Normal Form and Project Discussion
14	4/27	Database Transactions, Quiz 5
14	4/29	Database Server Connectivity
15	5/4	Database Authorization and OLAP
15	5/6	Distributed database