Database Management System

COMP202TH

"Relational processing entails treating whole relationships as operands. Its primary purpose is loop-avoidance, an absolute requirement for end users to be productive at all, and a clear productivity booster for application programmers."
- E. F. Codd

Course Outcomes:

- ***To equip students with a solid understanding of database management systems and the process of database design.***

- ***Students will develop the necessary skills to design and manage databases effectively, ensuring data integrity and efficient data retrieval.***

- ***Students will develop skill in relational algebra and writing SQL queries to retrieve and manipulate data.***

Course Material:
All the course material will be available on Canvas.

In the beginning of the course, all the students will receive an invite on their respective e-mail IDs for joining the course.
I will use e-mail Ids that you have filled in your Admission forms. If some of you will be using any alternate e-mail ID then do update me.

Link to Course Material: Will update as the session starts
All the assignments, quizzes and tests will be maintained online on Canvas only.
Communication via email is preferable. So, do email me for any queries or information regarding joining the course.

For queries related to course material, the in-built messaging system of canvas is recommended.

Course Schedule

Total Lectures: 19 + Final Project + Lab Exercises

Reference Books: Fundamentals of Database Systems(6th) by Elmasri & Navathe

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Class Time: as per time-table approved by the College.

Room No: 129 (1st Floor, Old Building Govt. College Hamirpur)

All the practical classes will be conducted in the Department of Computer Science Lab (Room No: 128) on the 1st floor of the old building of Govt. College Hamirpur.

The schedule of lectures will be in accordance with the approved academic calendar of the college.

Lecture	
	Introduction
Lecture: 1	Database: What is it? & why we need it?
Lecture: 2	DBMS
Lecture: 3	File Oriented System vs Database
Lecture: 4	Data Models
Lecture: 5	DBMS Architecture & Data Independence
Lecture: 6	Database Design Phases
Lecture: 7	Data Modelling using ER Model
	Unit Test-1

Lecture: 8	SQL Queries Basic-hands on
Lecture: 9	SQL
Lecture: 10	SQL 99 Schema Definition Constraints
Lecture: 11	Relational Model
Lecture: 12	Relational Constraints
Lecture: 13	Relational Algebra (Part-I)
Lecture: 14	Relational Algebra (Part-II)
Unit Test-2	
Lecture: 15	Functional Dependencies
Lecture: 16	Database Normalization (Part-I)
Lecture: 17	Database Normalization (Part-II)
Lecture: 18	Types of Keys in Relational Model & Codd Rules
Lecture: 19	ER and EER to relational Mapping
Unit Test-3	
Final Project Common with COMP203 course	

Most of the theory of this course will be covered in practical classes.