DATABASE MANAGEMENT SYSTEM 2:1:1

Course Code:CSC060

Course Outcomes:

At the end of the course students will be able to:

CO1. Explain the features of database management systems and Relational database.
CO2. Design conceptual models of a database using ER modelling for real life applications and also construct queries in Relational Algebra.
CO3. Create and populate a RDBMS for a real life application, with constraints and keys, using SQL.
CO4. Retrieve any type of information from a data base by formulating complex queries in SQL.
CO5. Analyze the existing design of a database schema and apply concepts of normalization to design an optimal database.
CO6. Build indexing mechanisms for efficient retrieval of information from a database

UNIT 1

Introduction and conceptual modeling databases and Database users, Data modeling using the entity relationship (ER) model, the enhanced entity – relationship (EER) model.

UNIT 2

Relational model: Concepts constraints, Languages, Design and programming.

The relational data model and relational database constraints, Relational algebra and relational calculus, Introduction to SQL Programming technique

UNIT 3

Database design theory and methodology functional dependencies and Normalization for relational database, Relational database design algorithms and further dependencies, practical database design methodology and use of UML diagrams.

UNIT 4

Introduction to transaction processing concepts and theory recovery

REFERENCES

1. Fundamentals of database system – 5th Edition – Ramez elmasri, Navathe – Person edition

2 .An introduction to database system – 8th Edition – C. J. Date, Kannan – Person Education

3.Database system concepts – 5th Edition – Korth, Sudarshan – McGraw Bill Edition

4. Database Management System- Raghuramakrishnan.

5. An Introduction to Database System- Bipin Desai

6. Principles of Database System- J D Ullman