ITC08 :: Database Management System

(3L-0T-2P)

Introduction to database systems: Overview, File Systems Vs. a DBMS, Advantages of DBMS, Levels of Abstraction, Data Independence, Data Models and their comparison (Hierarchical, Network, Relational Model).

Relational Data models: Structure of Relational Database, Integrity Constraints over relations, Enforcing Integrity Constraints, Relational Algebra and Calculus, Introduction to SQL.

Database Design: Top down approach (ER Model), Participation Constraints, Specialization, Generalization and Aggregation, Bottom up approach (Normalization), Normal Forms Based on Primary Keys, (1NF, 2NF, 3NF & BCNF), Transformation of ER Schema to relational tables.

Transactions and File system: Transactions, Concurrency Control and Database Recovery, Database Security Introduction to File System, File Organization, File Access Methods, File Storage Devices.

Management Information system: Basic Architecture of MIS, Components of MIS –Reporting styles, frequency, targeted managerial level, software and Hardware. Targeted audience of MIS design and development of MIS for various functional areas: Marketing, finance, purchasing, production, distribution, human resource department, implementation aspects, implementation framework, basics, catalysts & change agents.