Data Base Management System and Data warehousing

Course Outcome for Database Management System and Data Warehousing: Upon successful completion of this course, students will be able to:

- 1. Remember: Recall the fundamental concepts of Database Management System (DBMS) including data abstraction, data models (Entity Relationship Model, Relational Model), database languages, and Structured Query Language (SQL).
- 2. Understand: Understand the importance of database design principles such as constraints, referential integrity, functional dependencies, and normalization in ensuring data integrity and efficiency.
- 3. Apply: Apply knowledge of file organization, indexing, and hashing techniques to efficiently store and retrieve data in a database system.
- 4. Analyze: Analyze transaction management, concurrency control, and recovery concepts including ACID properties, rollback, recoverable schedules, lock-based protocols, deadlock handling, failure, and recovery techniques.
- 5. Evaluate: Evaluate query processing and optimization strategies to improve the performance of database queries.
- 6. Create: Design and implement a data warehouse architecture including data marts, schemas, and OLAP features for efficient data analysis and decision-making.
- 7. Synthesize: Synthesize concepts of OLTP and data warehousing to design and optimize a data warehouse for organizational needs.
- 8. Apply: Apply theoretical knowledge to real-world scenarios to solve complex problems related to database management and data warehousing.

