UE18CS180: DATABASE MANAGEMENT SYSTEMS

Course Objectives:
The objective(s) of this course is to,

- Introduce fundamental concepts, terminology and application of databases.
- Teach design concepts and creation of relational databases.
- Teach basic and advanced SQL commands.
- Provide overview of database programming and procedural languages.
- Provide overview of transaction management, database recovery and security.

Course Outcomes:
At the end of the course, the student will be able to:

- Construct an Entity-Relationship (E-R) model from specifications and transform it to a relational model.
- Design databases and apply normalization constraints.
- Construct queries in SQL or Relational Algebra to perform CRUD (Create, Retrieve, Update and Delete) operations on database.
- Understand and apply the concepts of procedural languages.
- Apply the principles of database transaction management, database recovery and security.

Course Content:
2. **SQL**: SQL Data Definition, Primary Data Types and Advanced Data Types like CLOB, BLOB, Specifying Constraints in SQL, Basic Retrieval Queries, Insert, Delete, Update and Schema Change Statements in SQL, Advanced SQL Queries, Specifying General Constraints as Assertions and Triggers, Views, Additional Features of SQL, Database Programming, PL/SQL.
**Pre-requisite Courses:** None.

**Reference Book(s):**