

DBMS

Modules

Module 1: Introduction to DBMS

Get started with the fundamentals of DBMS in this comprehensive module. Gain an understanding of data management concepts, database models, and the role of DBMS in organizations. Explore various types of databases and their applications. Learn about key components of a DBMS and their functions. This module provides essential DBMS course details to lay a strong foundation for your database management journey.

Module 2: Database Design and Schema

In this module, dive into the world of database design and schema. Learn the principles of logical and physical database design. Understand entity-relationship modeling and create efficient database schemas. Discover normalization techniques to eliminate data redundancy and improve data integrity. This module provides hands-on exercises and practical examples to reinforce your understanding of database design concepts.

Module 3: SQL and Query Optimization

Master the power of SQL in this module. Learn to write SQL queries to retrieve, manipulate, and analyze data. Understand different types of SQL statements and their applications. Explore advanced topics such as joins, subqueries, and aggregate functions. Dive into query optimization techniques to enhance query performance. Gain practical experience through real-world scenarios and exercises.

Module 4: Transaction Management and Concurrency Control

Delve into the crucial aspects of transaction management and concurrency control. Learn about ACID properties, transaction processing, and recovery mechanisms. Understand concurrency issues in multi-user environments and explore techniques like locking and timestamping. Gain insights into isolation levels and transaction management strategies. This module equips you with the skills to ensure data consistency and reliability.

Module 5: Database Administration and Security

Learn the essential responsibilities of a database administrator (DBA). Dive into database administration tasks such as user management, backup and recovery, and performance tuning. Understand the importance of database security and explore techniques for access control and data encryption. Gain hands-on experience in managing and securing databases effectively. This module provides practical guidance to excel in database administration.