greatlearning

DBMS - 2

Course Description:

- To provide comprehensive introduction to SQL from several perspectives to introduce the methods for designing a database and learn various query methods.

Learning Outcomes:

After completing this course, you will be able to:

- Write your SQL queries for data warehousing and analytics
- Navigate your way through a MYSQL Workbench environment
- Perform basic operations related to database and tables
- Apply data modelling concepts and their applications in design
- Construct a typical enterprise database

Pedagogy

The course is a mixture of classroom lectures, decks, in-class lab exercises, quizzes, take-home exercises and mini-projects.

Day 1

- Subqueries & Query Expressions
- Subqueries in Where Clause
- Outer References
- Subquery Search Condition
- Subquery in FROM Clause
- Nested Subqueries
- Set Membership Test using Nested Subqueries
- Set Comparison Test Using Nested Subquery
- Subqueries with the 'WITH' Clause
- Subqueries in the Having Clause
- Scalar Valued Expression

Day 2

- Subqueries and Joins
- Row-valued Expression
- Query Expressions
- Advanced Aggregate Functions
- Cross-Tab and Relational Tables
- Recursive Query Expression

Day 3

- Data Integrity
- **ACID Properties**
- **Normalization**
- **Constraints on Single Relation**
- **Column Check constraints**
- Entity Integrity
- Uniqueness Constraints
- **Referential Integrity Problems**
- **Delete and Update Rules**
- Cascaded, Deletes, and Updates
- **Referential cycles**
- Deferred Constraints

Day 4

- Transaction Processing
- SQL Transaction Model
- SAVEPOINT and RELEASE SAVEPOINT statement
- COMMIT Statement
- Locking
- Locking Levels
- Shared and Exclusive Locks
- Views
- How the RDBMS handles views
- Advantages and Disadvantages of
- views
- Horizontal View
- Vertical View
- Row Column subset view
- Grouped Views
- Joined Views
- CHECK OPTION
- Drop view
- Materialized view