COURSE SYLLABUS

SQL Server Level I

Learn the fundamentals of SQL (Structured Query Language) and relational databases, so you can start writing SQL queries to extract and understand the information stored in databases.

> Group classes (NYC) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://training-nyc.com/courses/sql-level-1



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Course Outline

Foundations of SQL & Databases

SQL Fundamental Concepts

- What is SQL & why is it used?
- Flavors of SQL: SQL Server vs Postgres, etc.
- Database Tables, Rows, & Columns

Exploring Databases & Writing SQL Statements (with the free SQL Server Management Studio app)

- Connecting to a Database
- Object Explorer
- SQL Query Editor
- Using Code Hints
- Viewing the Results of your SQL query
- Setting Preferences (Options)

Writing SQL Queries

Writing SELECT Statements

- Syntax of a SELECT statement
- Selecting all columns or specific columns from a table
- Limiting the number of results using TOP
- Ordering the results using ORDER BY
- Returning only DISTINCT records (eliminating duplicates)

Filtering Results

- Data Types (Strings vs Numbers)
- Comparison Operators: equal to, greater or less than, not equal to, etc.

- Filtering results using WHERE, AND, OR, IN, and NOT
- Pattern Matching: Wildcard Filters
- Case Sensitivity

Using Joins to Combine Data from Multiple Tables

Understanding Table Relationships

- What are Primary vs Foreign Keys
- Creating ER (Entity Relationship) Diagrams to visualize what's in a database
- Database Relations: One-to-One, One-to-Many, & Many-to-Many

Combining Tables with JOIN

- Inner Joins
- Column & Table Aliases