SQL: Mastering The Language of Data

Section 1: Introduction to SQL

- **Introduction to the Course**
  - Welcome & Overview
  - Learning Objectives
  - How to Use This Course

- **What is SQL?**

- **Why Learn SQL?**

- **The Different Types of SQL Commands**

- **Creating and Querying Databases**

Section 2: SQL Basics

- **Data Manipulation Language (DML)**
  - The SELECT Statement
  - The INSERT, UPDATE, and DELETE Statements
  - Using Wildcards and Operators in SELECT Statements
  - Sorting and Grouping Data

- **Quiz**: Test Your Basics

Section 3: Working with Tables and Data Definition

- **Data Definition Language (DDL)**
  - The CREATE, ALTER, and DROP Statements
  - Creating Tables, Columns, and Constraints
  - Using Foreign Keys

- **Assignment**: Design and Create Your Table

Section 4: Advanced Data Manipulation

- **Advanced SQL Techniques**
    - Joins
    - Subqueries
    - Functions
    - Window Functions

- **Case Study**: Analyzing a Real-World Dataset

Section 5: Stored Procedures, Triggers, and Functions

- **Stored Procedures**

- **Triggers**

- **Functions**

- **Assignment**: Build Your Stored Procedure & Function

Section 6: Database Administration & Data Control

- **Data Control Language (DCL)**
    - The GRANT and REVOKE Statements
    - Managing User Permissions

- **Database Security and Best Practices**
    - Understanding SQL Injection: Risks and Examples
    - Preventing SQL Injection: Techniques and Tools

- **Database Management**
    - Backup and Restore
    - Performance Tuning

Section 7: Real-World Projects & Industry Practices

- **Real-World Projects**

- **Industry Insights**
    - Guest Lectures from Industry Experts

- SQL Best Practices

Section 8: Bonus Content

- **Case Studies**

- **Practice Exercises**

- **Certification Preparation**

Section 9: Career Support & Conclusion

- **Career Guidance**
   - Resume Tips for SQL Positions
   - Interview Preparation

- **Course Conclusion**
   - Summary of What You've Learned
   - Next Steps in Your SQL Journey

- **Final Exam**: Prove Your Mastery

Additional resources

- W3Schools: SQL Tutorial: https://www.w3schools.com/sql/

- Codecademy: SQL: https://www.codecademy.com/learn/learn-sql

- SQLZoo: https://sqlzoo.net/