1. \*\* Introduction to SQL: \*\*
2. What is SQL?
3. Syntax
4. Commands
5. Comments
6. Best Practices
7. How To Practice
8. History of SQL
9. SQL Standards

\*\*Relational Databases: \*\*

1. What is a Relational Database?
2. Key Concepts (Tables, Rows, Columns, etc.)
3. Database Management Systems (DBMS)

\*\*Data Retrieval: \*\*

1. SELECT Statement
2. FROM Clause
3. WHERE Clause
4. GROUP BY Clause
5. HAVING Clause
6. ORDER BY Clause
7. LIMIT and OFFSET
8. DISTINCT
9. AS
10. LIKE
11. IN
12. Aggregate Functions
13. Subqueries
14. Limit
15. Offset
16. Top

\*\*Joins: \*\*

1. Joins Introduction
2. INNER JOIN
3. OUTER JOIN Left Join
4. Right Join
5. Full Join
6. Cross Join
7. Anti-Join
8. Left vs. Right Join

\*\* Set Operators: \*\*

1. Set Operators Introduction
2. UNION
3. UNION ALL
4. INTERSECT
5. EXCEPT/MINUS

\*\*Indexes: \*\*

1. Indexes Introduction
2. Types of Indexes
3. Index Optimization

\*\*Data Definition: \*\*

1. CREATE DATABASE
2. CREATE TABLE
3. Data Types
4. Constraints
5. ALTER TABLE
6. DROP TABLE
7. Views
8. Relationships
9. Rename
10. Normalization
11. Normal Forms (1NF, 2NF, 3NF)
12. Denormalization

\*\*Data Manipulation (Contd.): \*\*

1. INSERT
2. UPDATE
3. DELETE
4. Truncate
5. MERGE

\*\*Transactions Control\*\*

1. What are Transactions?
2. COMMIT
3. ROLLBACK
4. SAVEPOINT
5. SET TRANSACTION
6. ACID Properties

\*\*Data control\*\*

1. GRANT
2. REVOKE

\*\*Advanced SQL: \*\*

1. Stored Procedures
2. Functions
3. Common Table Expressions (CTE)

\*\*Window Functions: \*\*

1. Window Functions Intro
2. ROW\_NUMBER()
3. RANK()
4. DENSE\_RANK()
5. NTILE()
6. LEAD() & LAG()
7. FIRST\_VALUE() & LAST\_VALUE()
8. PERCENT\_RANK() & CUME\_DIST()
9. OVER()

\*\*Data Analysis: \*\*

1. OLAP (Online Analytical Processing)
2. OLTP (Online Transaction Processing)
3. Fat Tables vs. Dimension Tables
4. Hash Tables
5. SCD (Slowly Changing Dimension)

\*\*Security and Optimization: \*\*

1. User Permissions and Access Control
2. SQL Injection Prevention

\*\*Other Concepts: \*\*

1. Index Optimization
2. Date Functions
3. String Functions
4. Case Statements
5. Pros and Cons of SQL

\*\*Interview Preparation: \*\*

1. Interview Questions
2. Interview Queries