

8. Query Language & SQL

→ SQL - is standard for querying relational databases due to its maturity, support and ease of use

9. Indexes

→ Data structures that improve query speed by allowing fast lookups but can slow down inserts/updates

10. Transactions & ACID properties

→ Transaction → A sequence of operations treated as a single unit

→ ACID - Atomicity, Consistency, Isolation, Durability → ensures reliable transactions

11. Data Engine

→ Core service for storing, processing and securing data

12. Data Modeling

→ the process of defining database structure

13. View in SQL

→ A virtual table based on SQL query

14. Stored Procedures & Triggers

→ Stored procedure → predefined SQL code for repetitive tasks

→ Trigger → Auto-executed code in response to database events

15. Batch vs Stream Processing