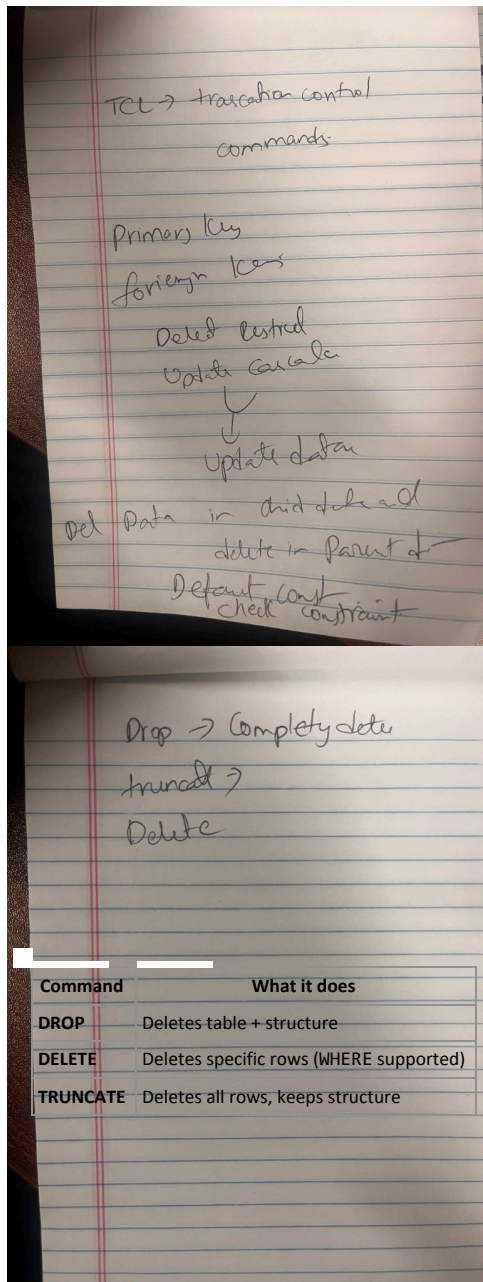


## Day -3

Wednesday, January 21, 2026 7:29 PM



Command	What it does
DROP	Deletes table + structure
DELETE	Deletes specific rows (WHERE supported)
TRUNCATE	Deletes all rows, keeps structure

Constraint	Purpose
NOT NULL	Prevents NULL values
UNIQUE	Prevents duplicate values
PRIMARY KEY	Uniquely identifies records
FOREIGN KEY	Links tables (relationships)
CHECK	Validates condition (e.g., age ≥ 18)
DEFAULT	Assigns default value

### Database Fundamentals & Architecture

- **Structured data**
  - Stored in fixed format (tables, rows, columns)
  - Example: relational databases
- **Unstructured data**
  - No fixed schema (images, videos, text logs)

#### Database Hierarchy

- **Server** → Hosts DBMS
- **Database** → Collection of schemas
- **Schema** → Logical grouping of tables
- **Tables** → Rows and columns storing data

#### ♦ DDL – Data Definition Language

Used to define database structure

- CREATE
- ALTER
- DROP
- TRUNCATE
- RENAME

#### ♦ DML – Data Manipulation Language

Used to modify data

- INSERT
- UPDATE
- DELETE

#### ♦ DQL – Data Query Language

Used to retrieve data

- SELECT

#### ♦ DCL – Data Control Language

Used for access control

- GRANT
- REVOKE

#### ♦ TCL – Transaction Control Language

Used to manage transactions

- COMMIT
- ROLLBACK
- SAVEPOINT

- **ON DELETE RESTRICT**
  - Prevents deletion of parent row if child exists
- **ON UPDATE CASCADE**
  - Automatically updates child table values