Database Schema vs. Database Instance: Short Notes

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1. Database Schema

- **What it is:** The **blueprint** or **design** of a database.
- **Nature: Static** and unchanging. It defines the structure.
- **What it includes:** Tables, columns, data types, constraints (like Primary and Foreign Keys), and relationships.
- **Analogy:** The plan for building a house. It defines where the walls, doors, and rooms go.
- **Example:** CREATE TABLE Students (StudentID INT PRIMARY KEY, FirstName VARCHAR(50));

2. Database Instance

- **What it is:** The **actual data** stored in the database at a specific moment.
- **Nature: Dynamic** and constantly changing.
- **What it includes:** The rows (records) of data that fit the schema's structure.
- **Analogy:** The house after it's built and furnished. The furniture and people can change.
- **Example:** The rows of data in the Students table, such as (101, 'John') and (102, 'Jane').