

Key Components of a Database Schema

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1. **Tables:**
 - Represent entities in the database (e.g., Students, Courses, Patients).
 - Defined with columns (fields) and rows (records).
2. **Fields (Columns):**
 - Specify the type of data stored (e.g., name, age, ID).
 - Each column has a data type (e.g., INTEGER, VARCHAR, DATE).
3. **Relationships:**
 - Define how tables are connected using **keys**:
 - **Primary Key**: A unique identifier for each record in a table.
 - **Foreign Key**: A reference to a primary key in another table.
4. **Constraints:**
 - Rules that ensure data integrity and accuracy:
 - **NOT NULL**: Ensures a column cannot have null values.
 - **UNIQUE**: Prevents duplicate values in a column.
 - **CHECK**: Ensures a column satisfies a specific condition.
 - **DEFAULT**: Assigns a default value to a column if no value is provided.
5. **Views:**
 - Virtual tables created by querying data from one or more tables.
6. **Indexes:**
 - Improve query performance by enabling faster search and retrieval of data.