

1. Intro to Database : Data vs Information

Data → Raw, Unorganized

Information → Organized

2. Types of Database : 2 Types

- a. Relational Database (relation between other tables)
- b. Non-relational Database (no relation between other tables)

3. Properties of Database :

- a. **Field** → Column
- b. **Record** → Record
- c. **Values (data)** → each value of a cell

4. Tables and Keys : keys are 3 types [key == field]

- a. **Primary Key** → Each Unique Field (no same data repetition in a field) Which field helps to identify a unique record.
- b. **Composite Primary Key** → 2/2+ field together merged into one field to consider that as a primary key
- c. **Foreign Key** → One table's primary key is a foreign key for another table.

5. DBMS and RDBMS : System / Software to manage Database.

- a. Data / information
- b. Hardware (storage)
- c. Software (access hardware)
- d. User (we all)
- e. Processing Unit (rules: hashing, encryption)

DBMS Advantages :

- a. Organizedly data storing

- b. Fast searching
- c. Parallel accessing

DBMS Usages :

- a. Ticket Purchasing
- b. Library Management
- c. Educational Institutes
- d. Government purpose
- e. Websites maintaining

RDBMS : (Relational) → DBMS

6. Database Relation : Relation in DBMS are 3 types

- a. **One to One Relation** → There is one record/row with another table's 1 record/row relation.
- b. **One to Many / Many to One Relation** → There is one record with another table's many record relation.
- c. **Many to Many Relation** → There is many record with another table's many record relation.

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