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## **Database**

What is DBMS?

**Structuring**(where redundancy can be avoided)/ **Organisation** / **Management** / **Storage** of data(raw info) so that it is easy to use information by multiple users.

Oracle DB Sever

Software availables for Databsae Management System

- RDBMS Relational DBMS
  - Codd rules [12 rules]
  - DBMS with tables
  - Ex ⇒ Oracle, MySQL, PostgreSQL, IBMDB2, Microsoft SQL server, Microsoft Azure + 370 or more
- NoSQL
  - Document Oriented [JSON]
    - Ex ⇒ MongoDB
  - White column store [key:value]
    - Ex ⇒ Apache Cassendra
  - Graph DB[Mesh nodes]
    - Ex ⇒ Arango DB,Dgraph.

## Hash map

key:[multiple values]

Multiple data can be accessed using a single key.

 $Ex \Rightarrow$  student PRN is key and student information is value[Name, Contact details, Address].

Live SQL website

livesql

 $SQL \rightarrow Structured QUERY Language.$ 

ANSII - template.[Standard like IEEE or POSIX]

- DDL Data Defination Language
  - CREATE TABLE
  - ALTER
    - Add/ Remove/ Rename/ Modify datatype column
  - DROP TABLE

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- RENAME TABLE
- TRUNCATE TABLE
- COMMENT
  - Table
  - Column
- DML Data Manipulation Language
  - INSERT
  - UPDATE
  - DELETE
  - MERGE
    - INSERT
    - UPDATE
- DCL Data Control Language
  - GRANT
  - REVOKE
- DQL Data Query Language
  - SELECT
- TCL Transaction Control Language
  - SAVE POINT
  - ROLL BACK
  - COMMIT

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