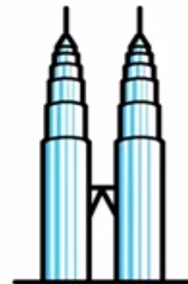
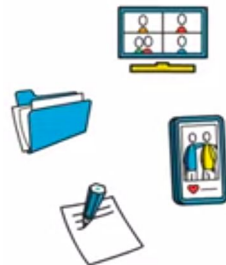
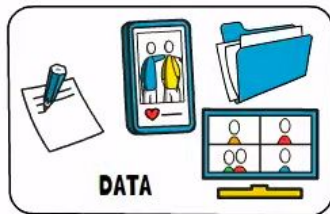


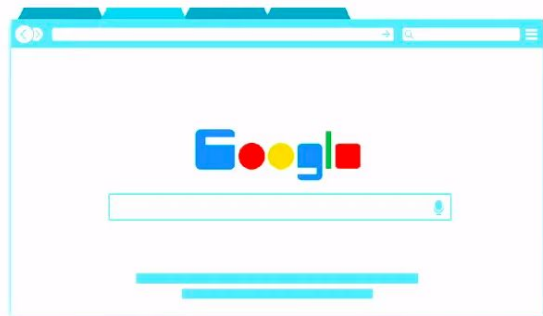
Databases



Imthiyas Vadakkan
19-08-2021

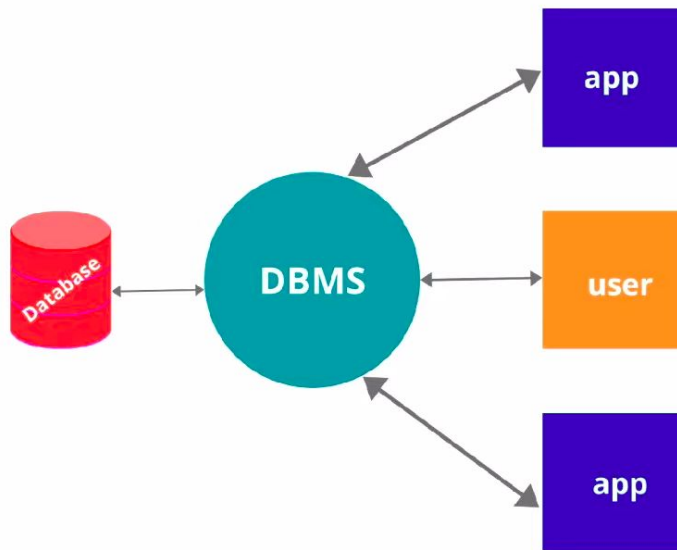
What is Database?





facebook.

Database vs DBMS



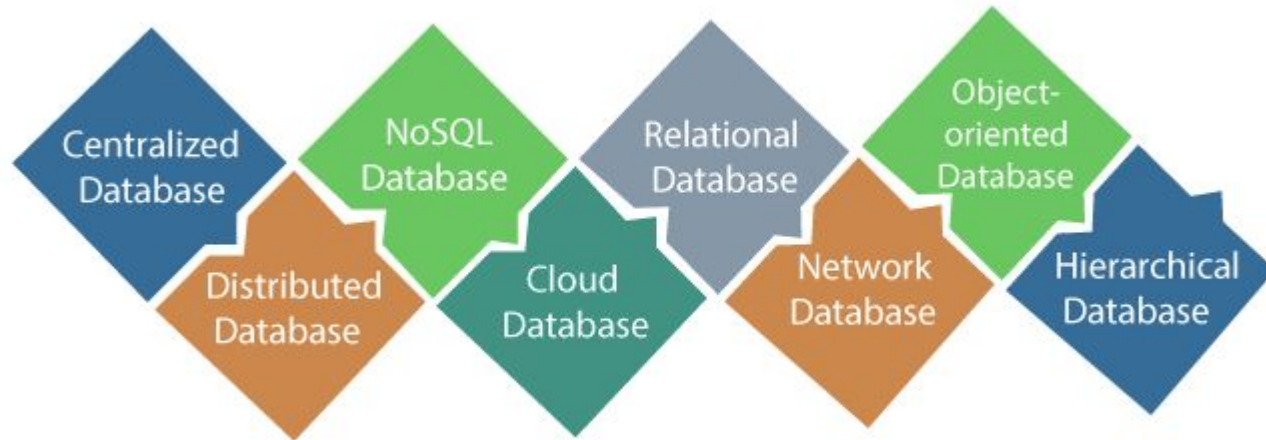
Examples of DBMS

- MySQL
- NoSQL
- MongoDB
- PostgreSQL

SQL(Structured Query Language)

Standard format for querying data

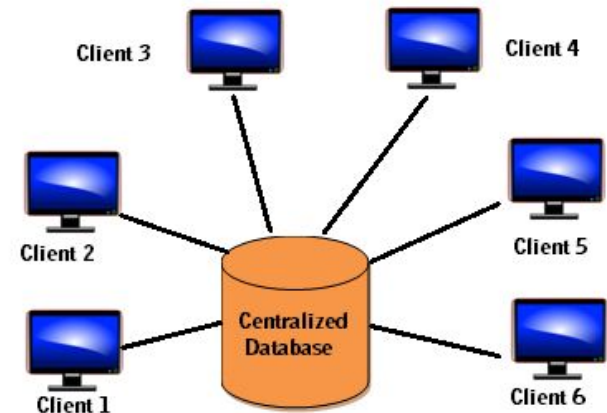
Types of Database



1. Centralized Database

- Stores data at a centralized database system
- used by an organization (e.g. a business company) or an institution (e.g. a university.)

Advantages	Disadvantages
<ul style="list-style-type: none">• Risk of data management is less	<ul style="list-style-type: none">• It is not easy to update.• Any server failure occurs, entire data will be lost

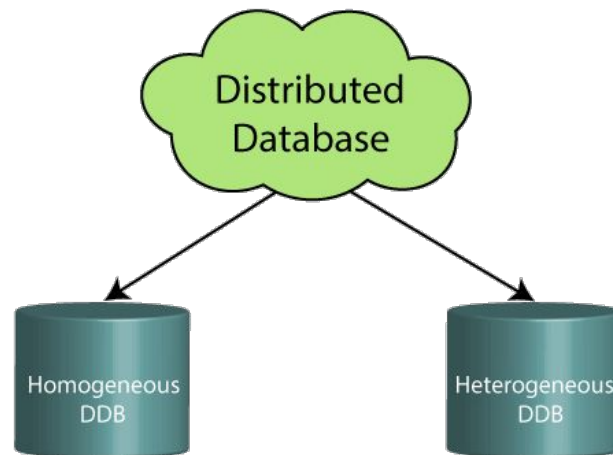


2. Distributed Database

- Data is distributed among different database system of organization

Advantages

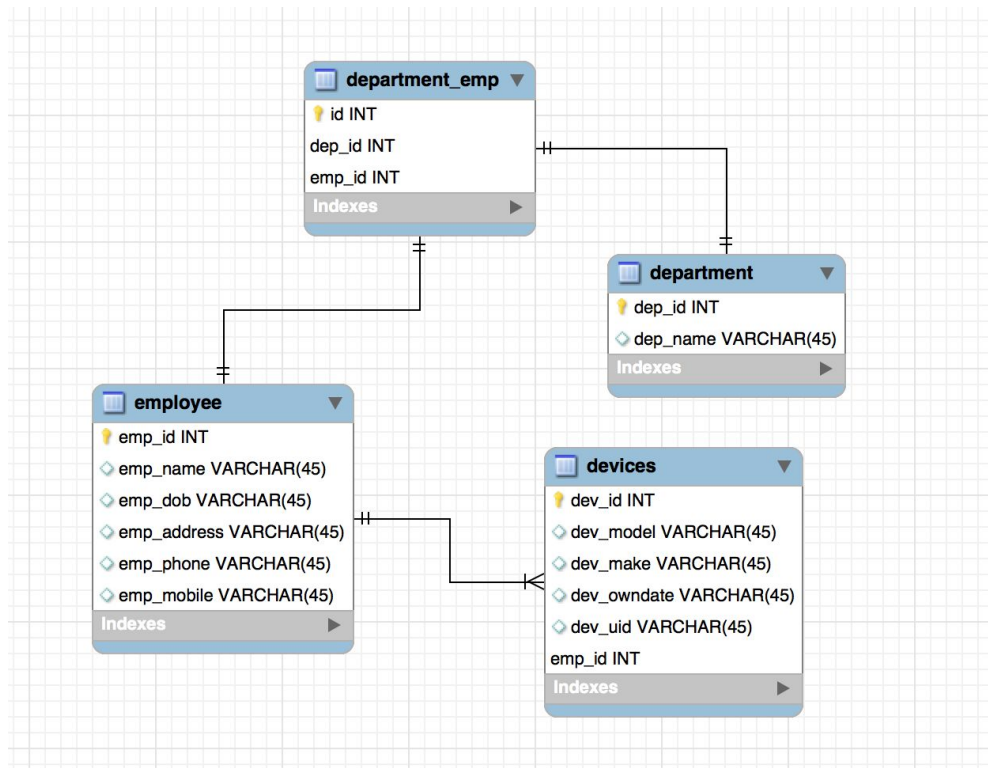
- Modular development is possible.
- One server failure will not affect the entire data set.



3. Relational Database

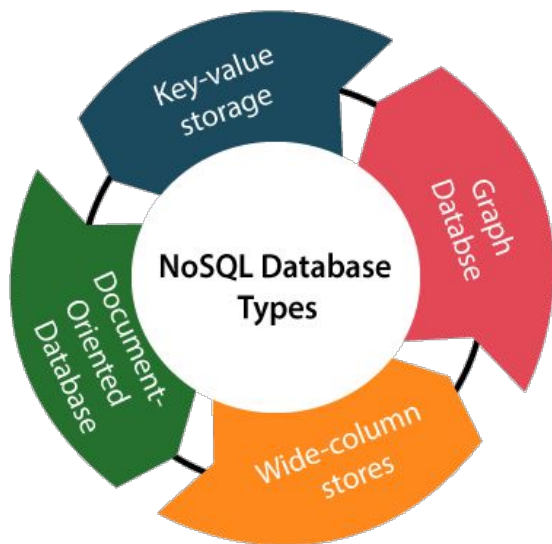
Example

- MySQL
- Oracle
- PostgreSQL
- Microsoft SQL Server



4. NoSQL Database

- It is a non-relational database
- Stores data not only in tabular form but in several different ways



4. NoSQL Database

Key-value storage

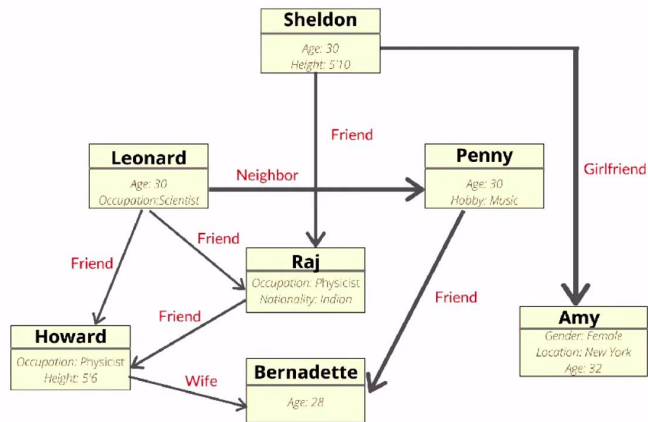
KEY	VALUE
Employee_ID	EMP_1002398_C1
Status	Active
Salary	25000
Joining_Date	17-Feb-2016
Details	{ "Location": "New York", "Project": "NewStore", "Skills": ["SQL", "Python"] }

Document-oriented database

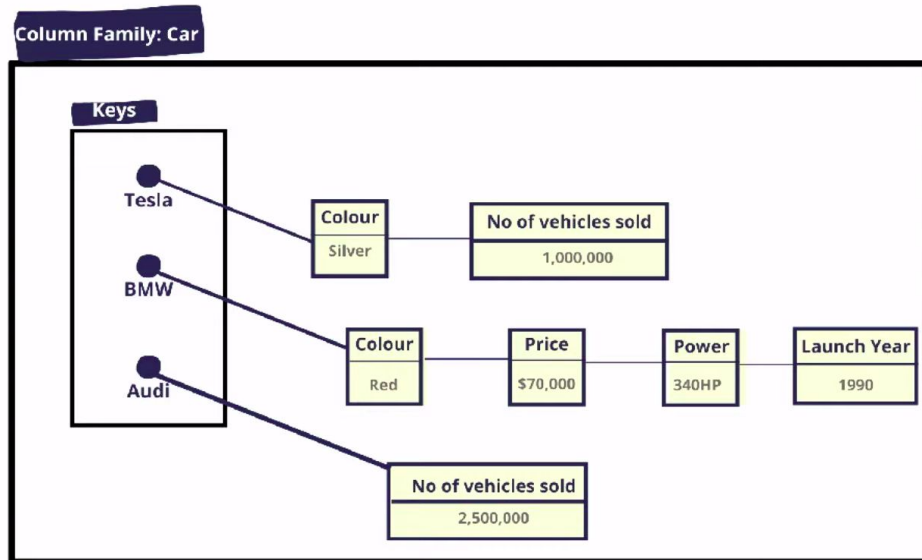
```
{  
  "Type": "Phone",  
  "Colour": "Green",  
  "Camera": [  
    "Dual 12MP Ultra Wide",  
    "Wide: f/1.8 aperture",  
    "2x optical zoom",  
    "Night mode"  
  ],  
  "price": "RM 3,500",  
  "Capacity": "64 GB"  
  "Chip": "A13 Bionic chip"  
}
```

4. NoSQL Database

Graph database



Wide-column database



5. Cloud Database



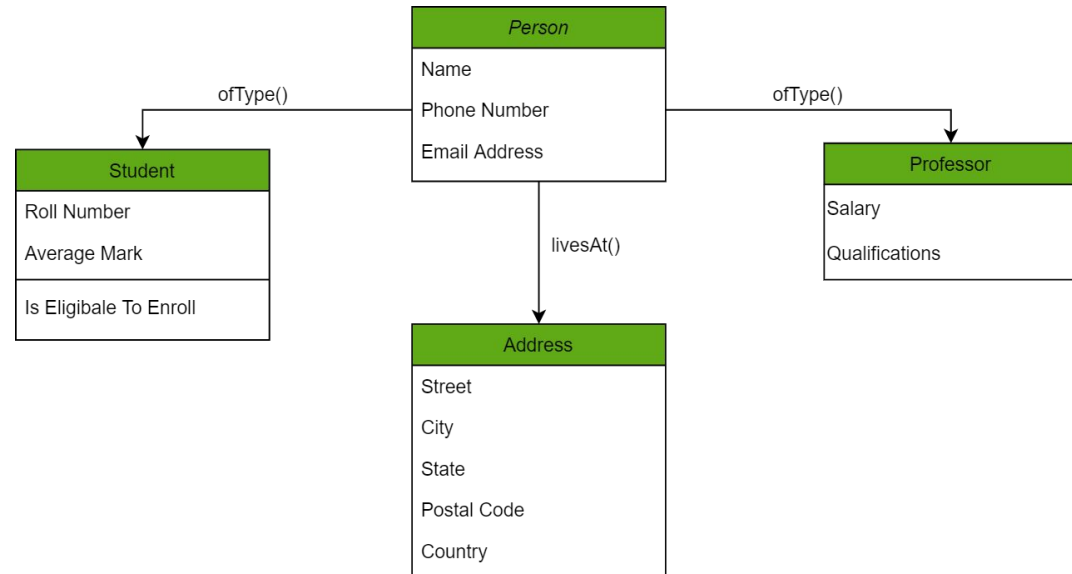
- Data is stored in a virtual environment and executes over the cloud computing platform.
- Provides users with various cloud computing services for accessing the database.

Examples:

- ❑ Amazon Web Services(AWS)
- ❑ Microsoft Azure
- ❑ Google Cloud, etc.

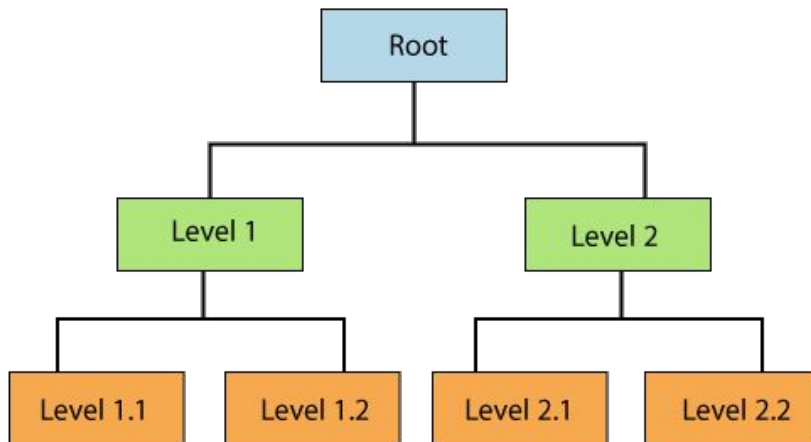
6. Object-oriented Database

Data is represented and stored as objects



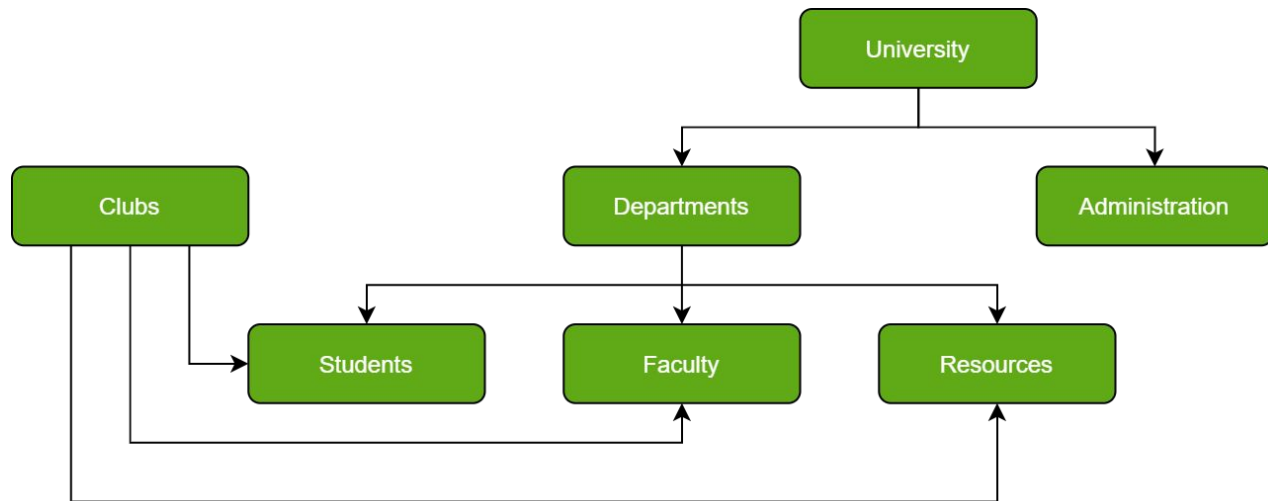
7. Hierarchical Databases

- Stores data in the form of parent-children relationship nodes.
- It organizes data in a tree-like structure.



8. Network Database

- Stores data in the form of parent-children relationship nodes.
- It organizes data in a tree-like structure.





THANK YOU!