DBMS - Introduction

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① Intro
- what? — Motivation
- Types
- Relational model
- SQL

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② — Schema Design

③ Datatypes + Normalisation

④ CRUD operation
↓
Create

Read

Update

Delete

5. Joins

6. Aggregates + Builtin

7. Transactions

8. Indexing

9. Subqueries, Views etc.

- Optimisation

MySQL

Postgres

MongoDB

Redis

Cassandra

Aerospike

Databases

Database Management Systems (DBMS)

Data - information

- Temperature in Bangalore
- How many matches has India lost to Australia?
- Your food orders from Swiggy

Data

① Requirement

② Analysis

Collection of related Data

→ Temp. in Bangalore

- 22nd M
- 23

- Queries
- Export
- backup
- Sharding

DRY

Don't Repeate Yourself

Motivation

Scaler

- Student
- Batches

- Mentor → | Name | Email | Phone | Exp. |

| id | Name | Email | Phone | Age | Address |

CSV — Comma Separated Values

| 1 | Tantia Tope | tantiaQ nevh |

TSV

| 1 | Tantia |

\t \" — Escaping

Why DBMS is better than Files?

① Performance (O(N))

↳ Sequential Access

② Data integrity

① Duplicates | Uniqueness

① Data type | Domain

③ Reference | Referential

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10:43 PM

3. Concurrency

4. Security

(5) Fault tolerance

MSSQL

key : value

① Redis

② DynamoDB

J

① MongoDB

② CouchDB

Q

Name : Tenzin

Student

Y

⑤ Columnar

Student | ID | NAME | AGE

Analytics → Influx Obj Naming Convention

② Graph-based

- map
- airflights
- social media

} Neo4j

Data model

- Relational model

① All students > 25

Subset

All student > 25 and < 30

Intersection

Set

Scalen

Student | Marks | Batch

① Tables

② Columns – attributes

③ Rows

④ Keys

1. Propertie of relational
2. Keys
3. Work with SQL
4. Schema design

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1. MySQL
2. Client

} DB-Fiddle

- Workbench)