Database Management System

Data is collection of raw bytes. It is a piece of information that are collected and stored.it can be various form such as number,text,images, or even sound. Data is used to analyze and make decisions, and it is the foundation for generating insights and knowledge in many fields

Data

Process/ interpret

Meaningful data / information

Information

Information is processed, organized, and structured data. It provides context of the data and enables decision making. Process data that make sense to us. Information is extracted from the data by analyzing and interpreting piece of data.

For example

We have data of people living in my locality, its data, when we analyze and interpret the data and comes to some conclusion, there are 100 senior citizens, the sex ratio is 1.1, these are information

Data can be categorized into several types based on its nature and how it is used.

Quantitative Data

Numerical data that can be measured and quantified. It is used to answer question about “how much” or “how many”. data like sales figures, temperature readings, test scores.

* Discrete data

Counts / measurements that are distinct and separate, like the number of students in a class.

* Continuous data

Measurement that can take any value within a range, such as height / weight

Qualitative Data

Data is descriptive and categorical. It is used to answer questions about “what kind” / “what type”. Data like customer feedback, interview transcript / product review.

* Nominal data

Categories without a specific order, like colors / type of fruits.

* Ordinal data

Categories with a meaningful order but without a fixed interval between them, like satisfaction ratings.

Structured Data

Unstructured Data

Semi structured

Tim series data

Spatial Data

Database

Database is electronic place/system where data is stored in a way that it can be easily accessed, managed, and updated.

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