

Data And Applications

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Lec 01 Notes

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What is data?

1. Unprocessed information
2. Information + Context
3. Memorised observations
4. Something that can be interpreted/
something which can be worked on

NO! Well, not exactly...

Let's define data not by what is is but what it has

1. There must a creator of data - This is an umbrella term, comprising of both human and systems
2. Believability - It must be believable
3. Meaning or Semantics - Data by itself should convey some meaning.

What is a Database?

Factual (undoubted information that can be recorded and have implicit meaning)
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A database is a collection of related data
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A database has the following implicit properties:

- A database represents some aspect of the real world
miniworld or Universe of Discourse (UOD)
- A database is a 'logically coherent' (associated, related) collection of data with some inerent meaning.
- A database is desgined, built and populated with data for a specific purpose

- It has an intended group of users and some preconceived (already thought of) applications in which these users are interested

What is a Databse System?

A database management system (DBMS) is a collection of programs that enables users to create and maintain a databse.

Defining Databases - Involves specifying the data types, structures, and constraints for the data to be stored in the databse.

Constructing Databases - Stores the data itself (populating) on some storage medium that is controlled by the DBMS

Manipulating Databases - querying the database to retrieve specific data, updating the databses to reflect changes to mini-world, and generating reports from the data.

Database + DBMS Software = Databse System
