Data And Applications

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1   Introduction

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

A database is a collection of related data

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 <u>purpose</u>

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

What is a Datase 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 databases to reflect changes to mini-world, and generating reports from the data.

Database + DBMS Software = Databse System