**The terms “data” and “information” are often used interchangeably, but they are not the same. What Is Data? What types of data exist? What are the different ways of storing and organizing data? What Is Information? How is it different from data? What are the goals and ways of data and information processing and management?**

Data is defined as a collection of individual facts or statistics. (While “datum” is technically the singular form of “data,” it’s not commonly used in everyday language.) Data can come in the form of text, observations, figures, images, numbers, graphs, or symbols. For example, data might include individual prices, weights, addresses, ages, names, temperatures, dates, or distances.

Data is a raw form of knowledge and, on its own, doesn’t carry any significance or purpose. In other words, you have to interpret data for it to have meaning. Data can be simple and may even seem useless until it is analyzed, organized, and interpreted.

There are two main types of data:

* **Quantitative data** is provided in numerical forms, like the weight, volume, or cost of an item.
* **Qualitative data** is descriptive but non-numerical, like the name, sex, or eye color of a person.

Information is knowledge gained through study, communication, research, or instruction. Essentially, information is the result of analyzing and interpreting pieces of data. Whereas data is individual figures, numbers, or graphs, information is the perception of those pieces of knowledge.

For example, a set of data could include temperature readings in a location over several years. Without any additional context, those temperatures have no meaning. However, when you analyze and organize that information, you could determine seasonal temperature patterns or even broader climate trends. Only when the data is organized and compiled in a useful way can it provide information that is beneficial to others.

**The Key Differences Between Data vs Information**

* Data is a collection of facts, while information puts those facts into context.
* While data is raw and unorganized, information is organized.
* Data points are individual and sometimes unrelated. Information maps out that data to provide a big-picture view of how it all fits together.
* Data, on its own, is meaningless. When it’s analyzed and interpreted, it becomes meaningful information.
* Data does not depend on information; however, information depends on data.
* Data typically comes in the form of graphs, numbers, figures, or statistics. Information is generally presented through words, language, thoughts, and ideas.
* Data isn’t sufficient for decision-making, but you can decide based on information.

 Data can be recorded and stored in three main forms: file storage, block storage, and object storage.

* **File storage**, also called file-level or file-based storage, is a hierarchical storage methodology used to organize and store data.
* **Block storage**, sometimes referred to as block-level storage, is a technology used to store data into blocks. The blocks are then stored as separate pieces, each with a unique identifier.
* **Object storage**, often referred to as object-based storage, is a data storage architecture for handling large amounts of unstructured data.

The traditional approach to **data management** consists of maintaining separate data files for each application. For example, an employee file would be maintained for payroll purposes, while an additional employee file might be maintained for newsletter purposes.

**Information management** is the process of acquiring, organizing, storing, and using information. The goal is to ensure that information is delivered to the right audience at the right time, to the right place, and in the right format in an efficient and effective manner.

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