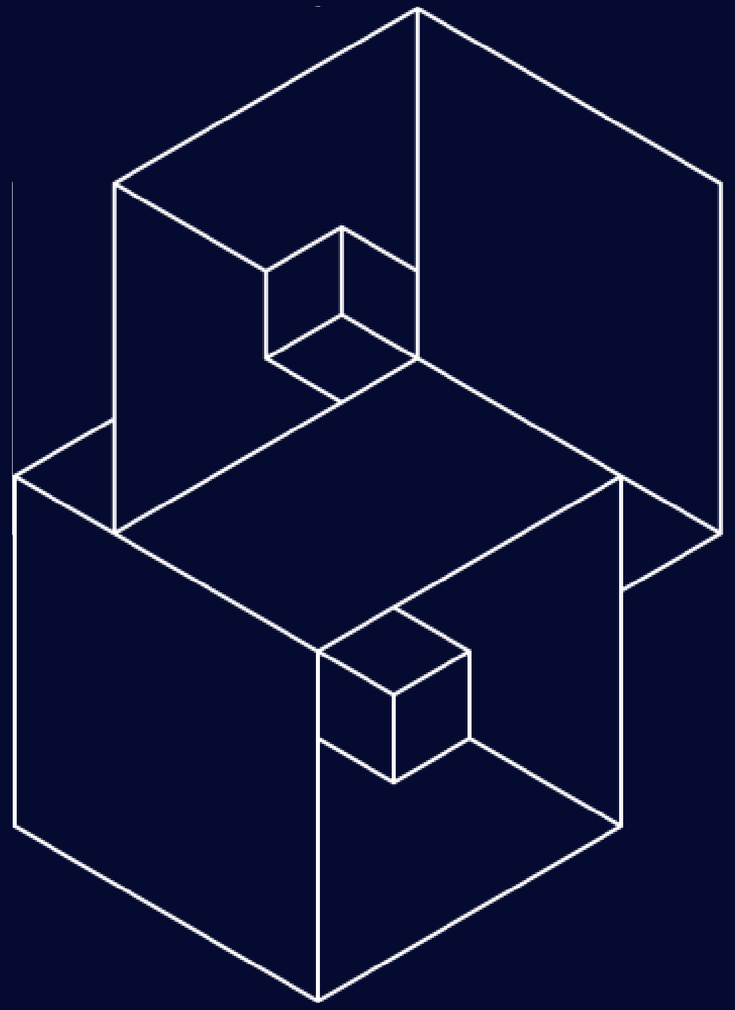
What is Data?



Data refers to:

- raw, unprocessed facts and figures collected through observations, experiments, or measurements. These facts are devoid of context and interpretation, making them the essential building blocks for generating meaningful information.

Types of Data

Quantitative Data

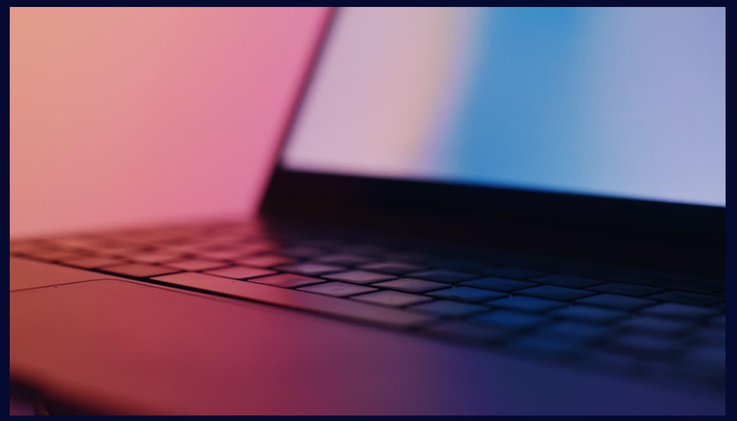
are numerical and measurable, dealing with quantities and values that can be expressed mathematically, like an item’s weight, volume, or cost. The two types of quantitative data are discrete and continuous data.

Qualitative Data

is descriptive and non-numerical, focusing on qualities and attributes that cannot be measured with numbers. It’s often subjective and interpretive. There are two fundamental types of qualitative data which is nominal and ordinal data.

Examples of Data

Hello



Text

Pictures

Audio and Video Recordings

What is Information?

Information is:

- been processed, organized, and structured to really mean something. When we add context to raw data, we transform it into information, which makes it a lot more useful for making decisions, understanding complex situations, or building new knowledge.

Examples of Information

Map

Books

Differences of Data and Information

Data

- Data is defined as unstructured information such as text, observations, images, symbols, and descriptions. In other words, data provides no specific function and has no meaning on its own.
- Data are the variables that help to develop ideas/conclusions.

Information

- Information refers to processed, organized, and structured data. It gives context for the facts and facilitates decision making. In other words, information is processed data that makes sense to us.
- Information is meaningful data.

What is Information System?


```
Menu  RefList  Utilities  Help

                    Allocate New Data Set
nmand ===>
                                                                More:
ta Set Name  . . . : RACFID.DATASET.TEST

nagement class . . . _________   (Blank for default management class)
orage class  . . . . METSC___    (Blank for default storage class)
olume serial . . . . LPRJ02      (Blank for system default volume) **
evice type . . . . . _________   (Generic unit or device address) **
ta class . . . . . . _________   (Blank for default data class)
pace units . . . . . TRKS_____   (BLKS, TRKS, CYLS, KB, MB, BYTES
                                  or RECORDS)
verage record unit   _           (M, K, or U)
rimary quantity  . . 500_____    (In above units)
econdary quantity    100_____    (In above units)
irectory blocks  . . 0____       (Zero for sequential data set) *
ecord format . . . . FB___
ecord length . . . . 80___
lock size  . . . . . 800__
ata set name type    _________   (LIBRARY, HFS, PDS, LARGE, BASIC, *
ata set version  . : _           EXTREQ, EXTPREF or blank)
KDSUTIL
```

Information System is:

- the study of complementary networks of hardware and software that people and organizations use to collect, filter, process, create, and distribute data.
- are combinations of hardware, software, and telecommunications networks that people build and use to collect, create, and distribute useful data, typically in organizational settings.”

Types of Information System

Transaction Processing System (TPS)

- Transactions are any activity or event affecting the company and include deposits, withdrawals, shipping, billing customers, order entry, and order placement. TPS supports these business transactions.

Office Automation System (OAS)

- comprises computers, communication-related technology, and personnel assigned to perform official tasks. It covers office transactions and supports official activity at every level in the organization, subdivided into managerial and clerical activities.

Management Information System (MIS)

- are designed to help middle managers and supervisors make decisions, plan, and control the workflow. The MIS pulls transactional data from various Transactional Processing Systems, compiles the information, and presents it in reports and displays.

Knowledge Work System (KWS)

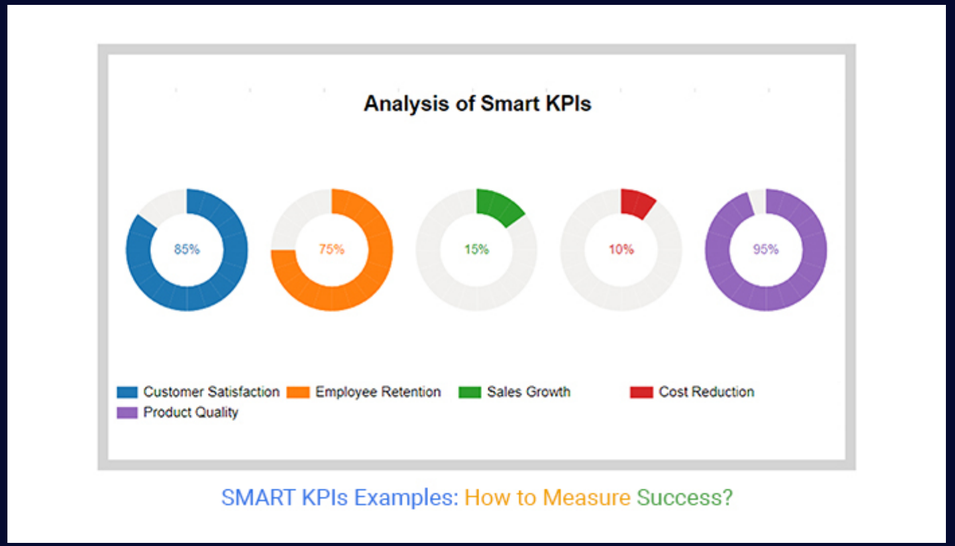
- is a specialized system that expedites knowledge creation and ensures the business's technical skills and knowledge are correctly applied. The Knowledge Work System aids workers in creating and disseminating new information using graphics, communication, and document management tools.

Decision Support System (DSS)

- is a management-level, interactive, computer-based information system that helps managers make decisions. The Decision Support System gives middle managers the information necessary to make informed, intelligent decisions.
- Decision Support Systems use different decision models to analyze or summarize large amounts of data into an easy-to-use form that makes it easier for managers to compare and analyze information. Often, these summaries take the form of charts and tables.

Executive Support System (ESS)

- provides greater telecommunication, better computing capabilities, and more efficient display options than the DSS. Executives use ESS to make effective decisions based on summarized internal data taken from DSS, MIS, and external sources. In addition, executive support systems help monitor performances, track competitors, spot opportunities and forecast future trends.



Analysis and Reaction

What I've understand was there are different types of data and information across the entire world that they have a lot of uses in our lives. On data, they are raw facts or any information that can be processed and it can provide valuable insights and knowledge, forming the foundation for decision-making. For the two types of data they are qualitative which is focused on textual or descriptive characteristics like images. While quantitative data they are focused on numbers. On information it has been processed, organized, and given meaning and context, making it useful and understandable. This means that the data that you have is unprocessed and if you process the data, you have the information of that processed data like weather checking. Data and information are similar in that they both start as unprocessed facts, can be gathered from a variety of sources, need to be processed in order to be useful, depend on accuracy and dependability for efficient use, can be digitally stored and transmitted, and are crucial for making decisions and generating knowledge in a variety of fields.

Analysis and Reaction

Next is information systems which is a solution that helps gather, analyze, maintain, and distribute data. This can be used by people and organizations that they can streamline workflows and achieve business goals. For everyday use we use our laptops, computers, and phones to access websites, social media platforms, and libraries. For business, there are different types of information systems which are transaction processing systems, office automation systems, management information systems, knowledge work

References

Awati, R. (2023, May). What is IS (information system or information services)? - Definition from WhatIs.com. WhatIs.com. https://www.techtarget.com/whatis/definition/IS-information-system-or-information-services

Jain, S. (2025, February 10). Data vs information: What's the difference? Bloomfire. https://bloomfire.com/blog/data-vs-information/

Data vs. Information: What's the Difference? (2025). Getguru.com. https://www.getguru.com/reference/what-is-data-vs-information#what-is-data

GeeksforGeeks. (2020, January 29). Difference between Information and Data. GeeksforGeeks. https://www.geeksforgeeks.org/computer-organization-architecture/difference-between-information-and-data/

Saini, K. (2021, November 15). The 6 Types of Information Systems and Their Applications | Simplilearn. Simplilearn.com. https://www.simplilearn.com/types-of-information-systems-and-applications-article

Bourgeois, D., & Bourgeois, D. T. (2014). Chapter 1: What Is an Information System? Ecampusontario.pressbooks.pub. https://ecampusontario.pressbooks.pub/infosysbus/chapter/chapter-1-what-is-an-information-system/