

# PORTFOLIO #2

Data and Information,  
Information Systems, and  
Different Types of  
Support Systems in  
Information Systems



# WHAT IS DATA AND INFORMATION

## DATA

- Data is everywhere—the government, web server, business partners, and even your body (Loukides, 2011).
- According to The Oxford Learner's Dictionary (2021), data are “facts or information, especially when examined and used to find out things or to make decisions.”.
- Moreover, a study by Olson (2021) noted that “all is data”.



## INFORMATION

- Information is contained in descriptions, answers to questions that begin with such words as who, what, where, when, and how many.
- Moreover, information is an inward-forming. It is the change in a person from an encounter with data. It is a change in the knowledge, beliefs, values or behavior of the person (Boell & Cecez-Kecmanovic, 2015).

# DIFFERENCE BETWEEN DATA AND INFORMATION

According to Jain (2025),

- Data is raw and unstructured, like individual customer interactions or transaction logs. On the other hand, information provides context and insights, like a trend analysis that shows increasing customer satisfaction or sales figures over time.
- Data is often abundant and readily available, but it can be overwhelming without interpretation. Meanwhile, information that is curated and usable offers strategic insights to guide business decisions.



# WHAT ARE INFORMATION SYSTEMS?

- According to Naud et al. (2020), the most general conception of Information Systems (IS) simply refers to a database where information can be retrieved through an interface. At the other end, the more specific conception considers IS to encompass the total information flow of a system, typically a large organization, including people, data, processes, and information technology that interact to collect, process, store, and provide as output the information needed to support an organization.
- Moreover, Boell & Cecez-Kecmanovic (2015) state that Information systems generate, store, retrieve, and process data. In many cases, their processing is statistical and arithmetical.



# **DIFFERENT TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEMS**

According to Al-Mamary et. al.(2014), these are the types and roles of different support systems in Information Systems:

## **TRANSACTION PROCESSING SYSTEM (TPS)**

are the fundamental business systems that support the operational level of an organization. It is a computerized system that performs and records the daily routine transactions necessary for the conduct of the business.

## **MANAGEMENT INFORMATION SYSTEMS (MIS)**

are a type of computer information system that collects and processes information from various sources to support management decision-making at different levels within an institution. Provide information in the form of pre-specified reports and displays to support business decision-making.

## **DECISION SUPPORT SYSTEMS (DSS)**

a computer-based system intended for use by a particular manager or usually a group of managers at any organizational level in deciding on the process of solving a semi-structured decision.

# DIFFERENT TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEMS

## KNOWLEDGE MANAGEMENT SYSTEMS (KMS)

Knowledge management systems are knowledge-based information systems that support the creation, organization, and dissemination of business knowledge to employees and managers throughout a company.

## EXECUTIVE INFORMATION SYSTEMS (EIS)

A computer-based system intended for use by a particular manager or usually a group of managers at any organizational level in deciding on the process of solving a semi-structured decision. Also, provide critical information from a wide variety of internal and external sources (in easy-to-use displays to executives and managers

# ANALYSIS

While going through the concepts of data, information, and information systems, I realized how much these ideas are connected and how important they are in both daily life and in organizations. At first, data seemed like just raw facts scattered everywhere, but when I read more, it became clear that data only becomes useful when it is processed and turned into information. Information adds context and meaning, and that is what allows people to make decisions. I find it interesting how data on its own doesn't change much, but once we interact with it, it can shape our knowledge, beliefs, and even our behavior.

When I looked at information systems, I understood them as more than just databases or software. They include people, processes, and technology working together to collect, store, and process data into meaningful information. I appreciate how broad the concept is, because it shows that organizations rely on these systems not just for efficiency, but also for decision-making and strategy. I think this helped me see how the technical and human aspects of organizations are always tied together.

The different types of support systems also stood out to me. For example, transaction processing systems handle the basic daily operations, while management information systems and decision support systems are designed to help managers interpret data and make better choices. I noticed how each system works at different levels of the organization, from routine operations all the way up to executive decision-making. This layering makes sense because organizations need information in different forms depending on who is using it.

Overall, learning about these topics gave me a better understanding on how essential information systems are. They are not just tools but frameworks that connect people and data to create decisions and actions. This made me reflect on how often we depend on such systems in our everyday lives, sometimes without even realizing it.

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