

PORTFOLIO#2

GROUP - 4 CIS 1102

John Carl E. Bautista BSIT -1
(MW 1:30 - 3:00)

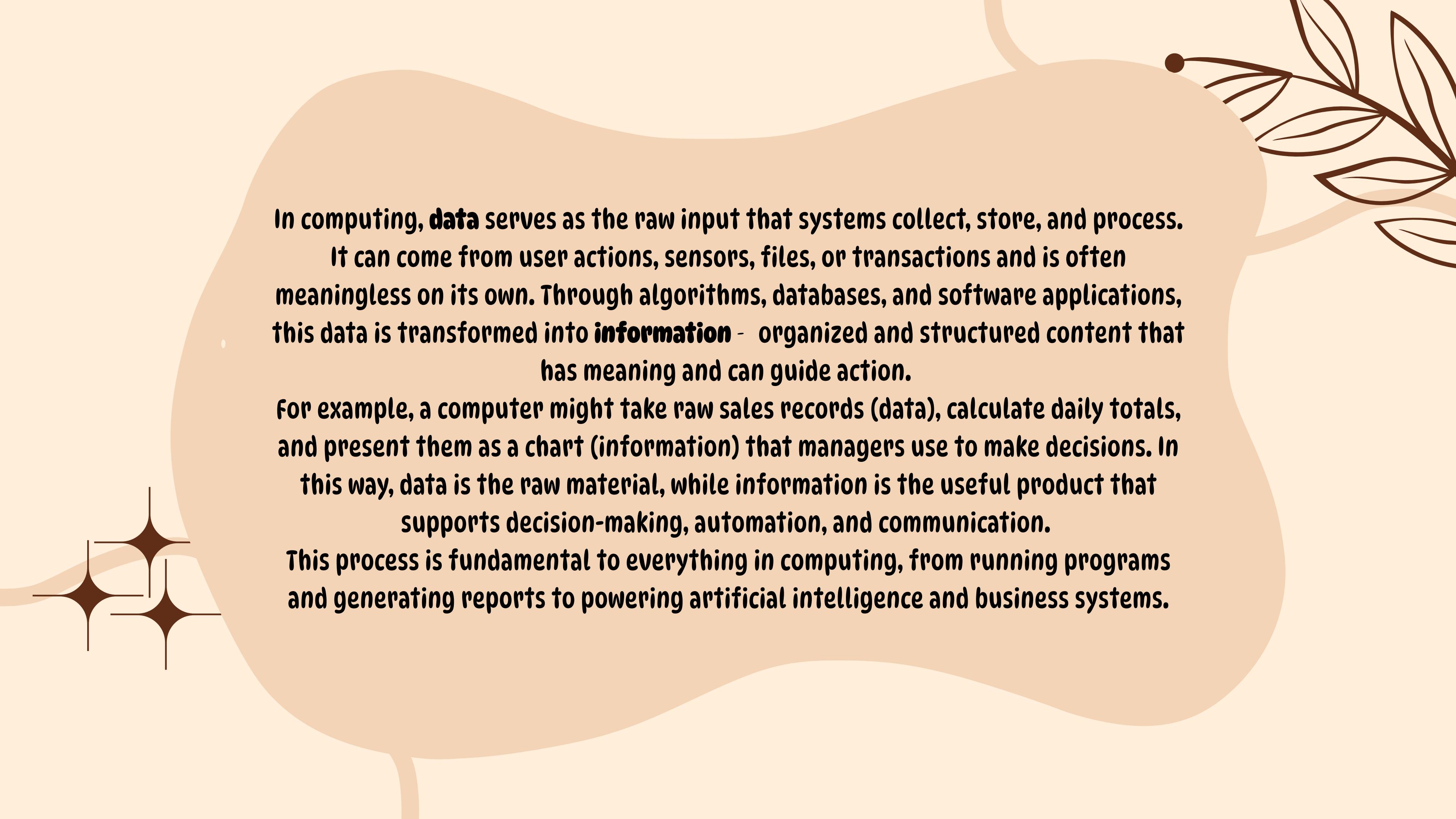
Data and Information

DATA

- is a collection of raw, unorganized facts – numbers, characters, images, or symbols – that on their own may not have meaning.

INFORMATION

- is data that has been processed, organized, structured, or contextualized so that it has meaning and can be useful for decision-making.



In computing, **data** serves as the raw input that systems collect, store, and process.

It can come from user actions, sensors, files, or transactions and is often meaningless on its own. Through algorithms, databases, and software applications, this data is transformed into **information** - organized and structured content that has meaning and can guide action.

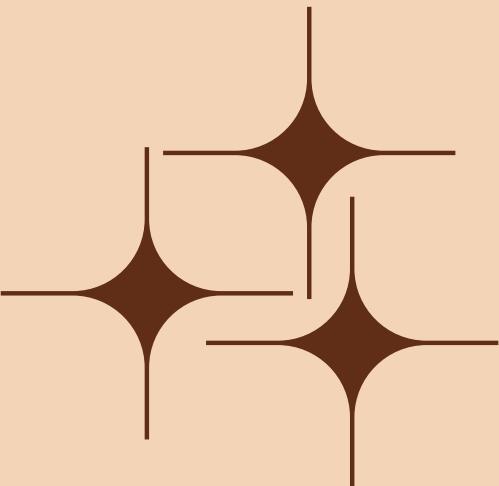
For example, a computer might take raw sales records (data), calculate daily totals, and present them as a chart (information) that managers use to make decisions. In this way, data is the raw material, while information is the useful product that supports decision-making, automation, and communication.

This process is fundamental to everything in computing, from running programs and generating reports to powering artificial intelligence and business systems.

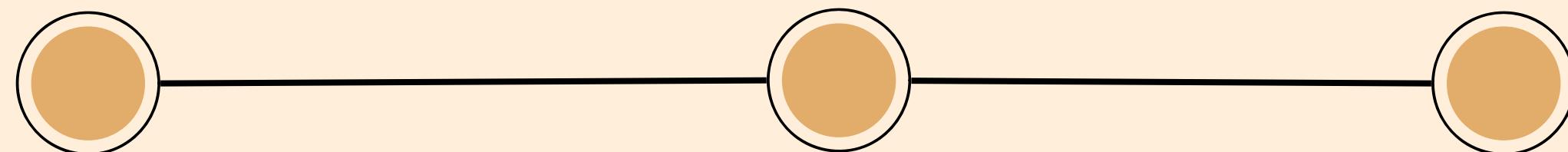
INFORMATION SYSTEMS

WHAT IS AN INFORMATION SYSTEM?

- is a structured combination of people, technology, processes, and data that work together to collect, process, store, and share information to support decision-making and operations.
- In simpler terms, an information system is not just a computer or software – it's the entire setup that ensures the right information reaches the right people at the right time. It usually includes:



PROCESS



Hardware:

- Computers, servers, and networking devices.
- Software: Applications and programs that process data.

Software:

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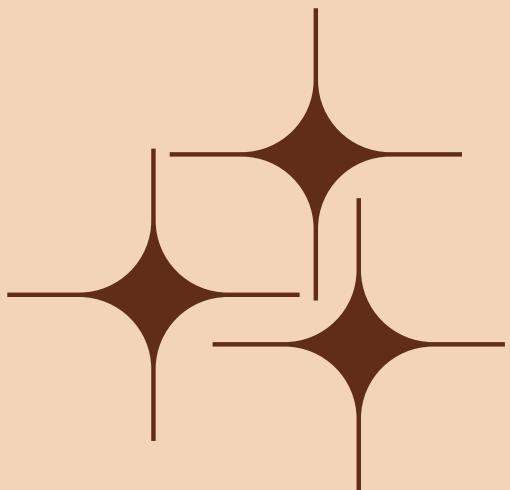
Data:

- The raw facts and records the system works with.
- People: Users who operate, manage, and benefit from the system.

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TYPES OF INFORMATION SYSTEMS



Transaction Processing Systems (TPS)

- Purpose: Handle routine, day-to-day business operations.
- Examples: Point-of-sale systems, ATM transactions, payroll systems.
- Use: Record transactions quickly and accurately, keep databases up-to-date.

Management Information Systems (MIS)

- Purpose: Provide regular summaries and reports from TPS data to help managers monitor performance.
- Examples: Sales reports, production summaries, budget reports.
- Use: Help middle managers with planning, controlling, and decision-making.

Decision Support Systems (DSS)

- Purpose: Assist managers in making non-routine, complex decisions.
- Examples: What-if analysis tools, forecasting models, data dashboards.
- Use: Combine data and models to suggest possible courses of action.

Executive Information Systems (EIS)

- Purpose: Give senior executives a big-picture view of the organization.
- Examples: Strategic dashboards, key performance indicator (KPI) reports.
- Use: Help with long-term planning and strategy.

Knowledge Management Systems (KMS)

- Purpose: Capture and share organizational knowledge and expertise.
- Examples: Wikis, document repositories, expert systems.
- Use: Encourage collaboration, innovation, and knowledge sharing.

Office Automation Systems (OAS)

- Purpose: Support day-to-day office tasks and communication.
- Examples: Email systems, word processors, scheduling tools.
- Use: Improve productivity and teamwork.

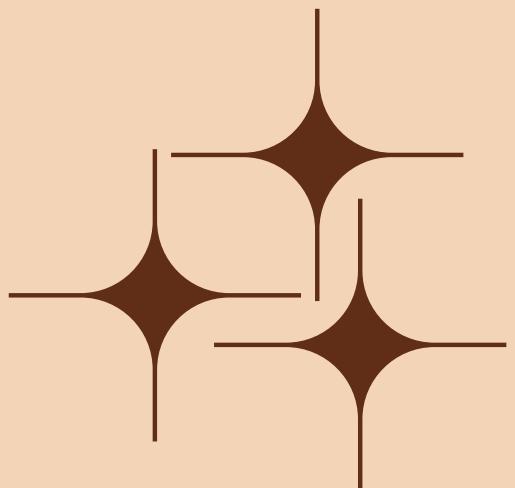
It's important for each type of information system to exist separately because they all do different jobs and help different people in the organization. Transaction Processing Systems (TPS) handle routine, high-volume operations and need to be super fast and accurate, while Management Information Systems (MIS) take that data and turn it into reports for managers - which, as Bhandari (2023) explains, helps them make clear and rational decisions. Decision Support Systems (DSS) and Executive Information Systems (EIS) go a step further by focusing on deeper analysis and strategic overviews for higher-level decision-making, something Asemi, Safari, and Zavareh (2012) also highlight as a key role of DSS. If everything was combined into one giant system, it would overwhelm users with too much information, slow down the system, and even make it harder to keep data secure (Mashli Aina, Wang Hu, & Al-Nakib, 2016). Having specialized systems means the right people get the right information at the right time, operations stay efficient, access can be controlled, and upgrades can happen without breaking everything else.

SUPPORT SYSTEM IN INFORMATION SYSTEMS

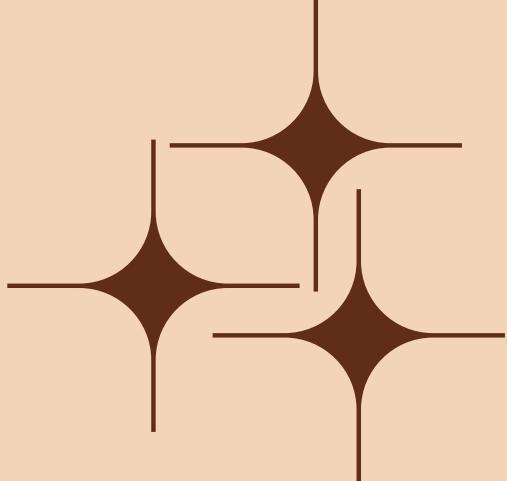


WHAT IS A SUPPORT SYSTEM IN INFORMATION SYSTEM?

- refers to a type of information system that is designed specifically to help people make decisions, solve problems, or work more effectively – instead of just recording or storing data.
- Are specialized tools that go beyond basic data processing. Their main goal is to support users – whether managers, employees, or executives – by giving them insights, suggestions, or tools to make better choices.



TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEMS



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Collaboration and Communication Systems

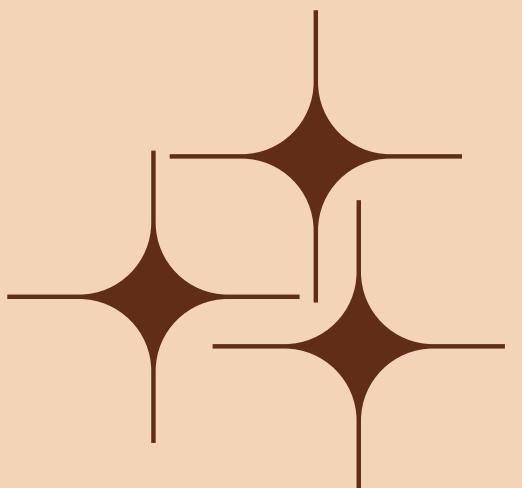
- What it does: Helps people work together, share documents, and communicate effectively.
- Example: Microsoft Teams, Slack, or Google Workspace used for teamwork on projects.
- Why it matters: Makes group projects easier, supports remote work, and improves productivity.

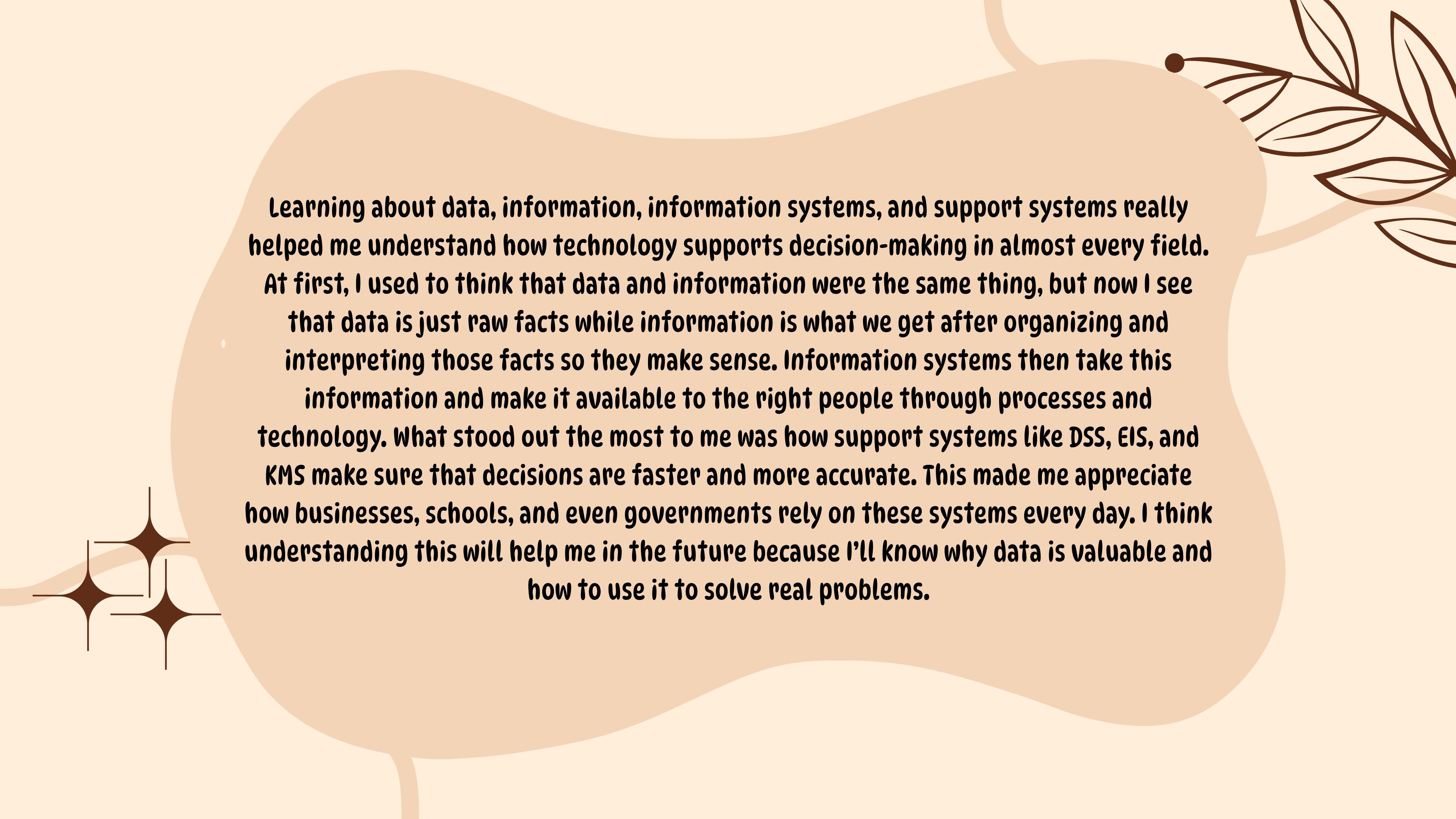
Intelligent Support Systems (AI-Based Systems)

- What it does: Uses artificial intelligence and expert systems to give recommendations or automate problem-solving.
- Example: Chatbots for customer service, medical diagnostic systems suggesting treatments.
- Why it matters: Saves human effort, improves accuracy, and works 24/7.

Support systems are super important because they make it easier for people to make good decisions. Instead of just giving raw data, these systems turn it into useful information that we can actually understand and use. For example, a Decision Support System can help a manager try out “what-if” situations before choosing what to do , exactly what Asemi, Safari, and Zavareh (2012) described when they said DSS helps managers make decisions in less structured situations. Executive Support Systems are also valuable because they show company leaders the most important numbers in one place, which makes planning for the future much simpler (Mashli Aina, Wang Hu, & Al-Nakib, 2016). Knowledge Management Systems are helpful too because they let everyone share tips, solutions, and experience so no one has to start from scratch - which, as Bhandari (2023) pointed out, leads to clearer and more rational decisions. If we didn't have these systems, people would spend way more time collecting and calculating data by hand, which could lead to mistakes. Having support systems makes work faster, decisions smarter, and teamwork easier.

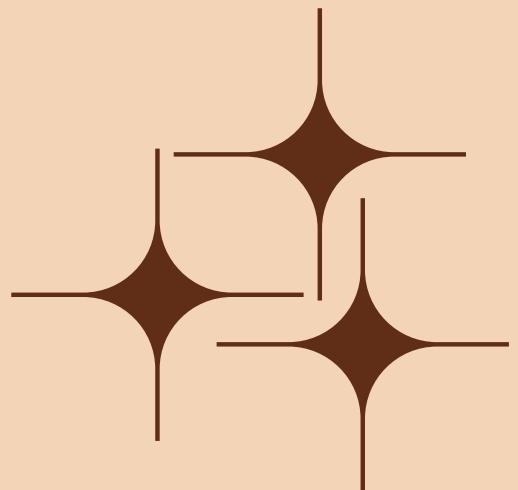
REFLECTION





Learning about data, information, information systems, and support systems really helped me understand how technology supports decision-making in almost every field. At first, I used to think that data and information were the same thing, but now I see that data is just raw facts while information is what we get after organizing and interpreting those facts so they make sense. Information systems then take this information and make it available to the right people through processes and technology. What stood out the most to me was how support systems like DSS, EIS, and KMS make sure that decisions are faster and more accurate. This made me appreciate how businesses, schools, and even governments rely on these systems every day. I think understanding this will help me in the future because I'll know why data is valuable and how to use it to solve real problems.

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