DATA, INFORMATION AND INFORMATION SYSTEM

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Start

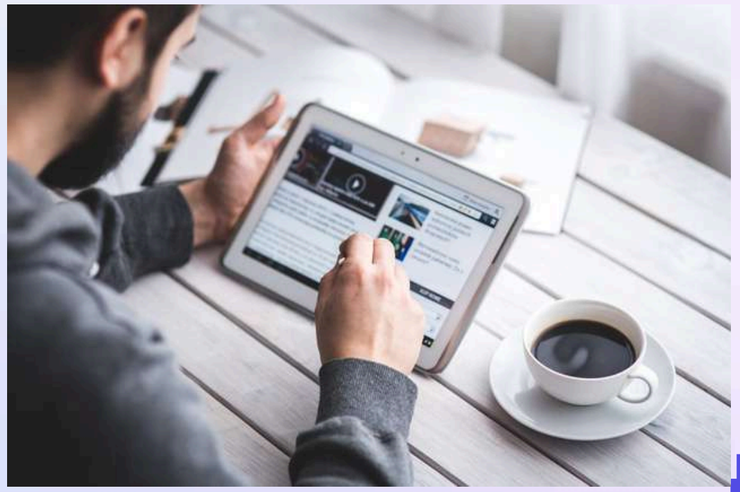
KEY FEATURES

- WHAT IS DATA?
- WHAT IS INFORMATION?
- DATA VS INFORMATION
- WHAT IS INFORMATION SYSTEM?
- TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEM

DATA

-Data represents raw elements or unprocessed facts, including numbers and symbols to text and images. When collected and observed without interpretation, these elements remain just data—simple and unorganized. When these pieces are analyzed and contextualized, they transform into something more meaningful.

Information



-You get information when data is processed, organized, interpreted, and structured. The comprehensible output derived from raw data helps inform decisions, strategies, and actions. Information is essentially data made valuable and accessible—an integral component of decision-making.

Data VS Information

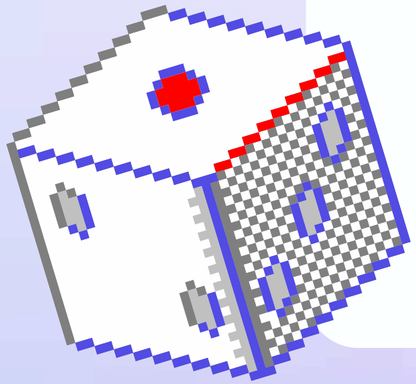
- **Data** is raw and unstructured, like individual customer interactions or transaction logs.
- **Data** is often abundant and readily available but can be overwhelming without interpretation.

- **Information** provides context and insights, like a trend analysis that shows increasing customer satisfaction or sales figures over time.
- **Information** is curated and actionable, offering strategic insights to guide business decisions.

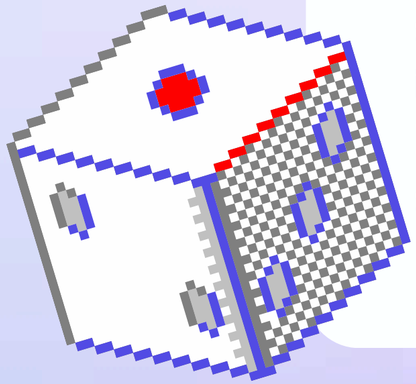

Data
• A collection of facts or statistics
• Unorganized
• Without Context
• Can be quantitative (numerical) or qualitative (descriptive)
• Examples: number of website visitors, individual customer survey responses, product price
Information
• The result of analyzing and interpreting data
• Has context
• Can be used to help make decisions
• Examples: website traffic changes, customer sentiment based on survey results, product price comparison

INFORMATION SYSTEM

information system, an integrated set of components for collecting, storing, and processing data and for providing information, knowledge, and digital products. Business firms and other organizations rely on information systems to carry out and manage their operations, interact with their customers and suppliers, and compete in the marketplace. Information systems are used to run interorganizational supply chains and electronic markets. For instance, corporations use information systems to process financial accounts, to manage their human resources, and to reach their potential customers with online promotions.



Many major companies are built entirely around information systems. These include eBay, a largely auction marketplace; Amazon, an expanding electronic mall and provider of cloud computing services; Alibaba, a business-to-business e-marketplace; and Google, a search engine company that derives most of its revenue from keyword advertising on Internet searches. Governments deploy information systems to provide services cost-effectively to citizens. Digital goods—such as electronic books, video products, and software—and online services, such as gaming and social networking, are delivered with information systems. Individuals rely on information systems, generally Internet-based, for conducting much of their personal lives: for socializing, study, shopping, banking, and entertainment.



TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEM

Management information systems (MIS) are computerized systems that collect, store, process and present data to support management decision-making. For example, an MIS in a hospital may collect data on patient admissions, treatments and outcomes to help its administrators make decisions about resource allocation and process improvements.

Knowledge work systems (KWS) are computer-based systems that support knowledge workers, such as researchers, analysts and consultants, by helping them create reports and presentations. For example, a KWS used by a marketing team may help create marketing materials, analyze customer data and track marketing campaigns.

TYPES OF SUPPORT SYSTEMS IN INFORMATION SYSTEM

Decision support systems (DSS) and business intelligence (BI) provide users with the ability to explore and analyze data to gain insights into business performance. For example, a system used by a retail chain may collect and analyze data on customer demographics, buying behavior and sales performance to guide changes in inventory management and marketing campaigns.

Transaction processing systems (TPS) support operational processes that produce and consume data. For example, a TPS used by a bank may process customer transactions, such as deposits and withdrawals, and maintain account balances.

Executive information systems (EIS), a type of DSS, provide senior executives with access to high-level information about the organization. EIS provides executives with real-time information and analytical tools to support strategic decision-making. For example, an EIS intended for a CEO may provide information on the company's financial performance, market trends and competitive landscape.

ANALYSIS/REFLECTION

The basis on which everything else is constructed is data. Information is created through processing and interpretation of the raw material. Giving meaning to unprocessed facts is a crucial step in the conversion of data into information. Information systems, which offer the framework and instruments to gather, store, process, and distribute information, help to facilitate this process.

As I consider these ideas and their interrelation, I find that they are symbiotic. Information systems act as the catalyst, data as the input, and information as the outcome. There could be no information without data. There could be no understanding or knowledge without information. Furthermore, the conversion of data to information would be laborious and ineffective without information systems. It is impossible to overestimate the significance of data, information, and information systems. They have completely changed how we interact, work, and learn. These ideas are essential to practically every facet of contemporary life, including healthcare, banking, education, and entertainment. But as our reliance on data and information grows, it is imperative to think about the ethical ramifications. Concerns including bias, security, and data privacy are growing in significance. Ensuring the responsible and ethical use of data and information systems is crucial as we progress in our understanding and application of these technologies.

To sum up, information systems, data, and information are interrelated ideas that significantly affect our daily lives. We can better understand their significance and influence on our world by thinking back on their relationship. It is crucial that we take into account the ethical ramifications of new technology as we advance and make sure they are applied sensibly and to everyone's advantage.

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