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Management Information Systems – APT3080B

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Assignment 1

COMPONENTS OF AN INFORMATION SYSTEM

What is a system? A system is a group of interrelated components with a clearly defined boundary that work together to achieve a common set of objectives according to (Wikipedia, Sytem - Wikipedia, 2023).

What is an information System? An information system is an organized combination of hardware, software and telecommunication networks that work together to achieve storage, retrieval, transformation and dissemination of information in an organization according to (Emeritus, 2023).

According to, (Gregersen, 2018), Information Systems have components that include: computer hardware, computer software, telecommunications, databases and data warehouses & human resources and procedures. Data is also another component of an information system according to, (Emeritus, 2023). The internet, according to (Wikipedia, Information System, 2023) is an information system component. Hardware, software, data and a suggestion of networking communication fall under a wing called technology within information systems according to, (Bourgeois D. B., 2014). Lastly we have commands as another component of an information system according to, (Birmingham, n.d.). Below, we are going to discuss the various information system components.

Technology: This can be thought as the application of scientific knowledge for practical purposes according to, (Bourgeois D. B., 2014) and this also houses software, hardware and data which are also information system components as well.

Hardware: This is the physical part of technology that interacts with information. According to (Gregersen, 2018), examples of hardware include, a smartphone, a supercomputer, peripheral devices and internet of things devices.

Software: This can exist in two types, system software and application software. System software includes operating systems that manage the hardware and other resources that are needed to offer the user control to the PC via a Graphical User Interface according to (Emeritus, 2023). An example of a system software is Microsoft Windows. Application software operate software that is geared towards a particular utility in information systems. According to, (edX, 2020), an example of an application software is a word processing application that is used to create and edit text documents.

Data: This is a collection of facts. According to, (Bourgeois D. , 2019), an example of data can include an address, a phone number or a social networking account.

Databases: They house collections of data that can be queried or retrieved for specific purposes according to (edX, 2020). They allow user to perform fundamental operations such as the storage and retrieval of data.

Data warehouses: These store data from multiple sources for analytical purposes which allow users to assess an organization or its operations according to, (edX, 2020). According to (Gregersen, 2018), both databases and data warehouses have assumed greater importance in information systems with the emergence of truly massive amounts of data that can collected and analyzed called, “big data”.

Human resources: They play a key role in interacting with the information systems according to, (Contributor, 2023). Examples of human resources include device operators, network administrators and system specialist according to (Juneja, n.d.).

Processes: These are a series of steps undertaken to achieve a desired outcome according to (Bourgeois D. B., 2014).

Procedures: These are the policies that govern the operation of an information system according to (Wikipedia, Information System, 2023).

Network resources: A network is a complex system of interconnected components that allows for communication to take places between two or more devices according to (Birmingham, n.d.). These consist of communication media, hubs and network devices according to (Juneja, n.d.).

Internet: According to (Wikipedia, Information System, 2023), this is a combination of data and people which is not necessary for an information system to function.

Telecommunication: These are systems that connect computer networks and allow information to be transmitted through them according to (edX, 2020). Examples include, Local Area Networks, Wide Area Networks and Virtual Private Networks.

Commands: These are procedures or instructions that the other aspects of a computer-based information systems need to process information, send or record it. According to (Birmingham, n.d.), they govern how data is supposed to be handled.

Users: These are the end users of information systems who use information produced for their own purpose. Examples of users include accountants, engineers, salespersons, customers, clerks, or managers according to (skc161931, 2023)

# References

Birmingham, U. o. (n.d.). *What Is Information Systems?* Retrieved from UAB Collat School of Business: https://businessdegrees.uab.edu/blog/what-is-information-systems/

Bourgeois, D. (2019). Information Systems for Business and Beyond. In D. Bourgeois, *Information Systems for Business and Beyond* (p. Chapter 1; Part I). Retrieved from https://opentextbook.site/informationsystems2019/chapter/chapter-1-what-is-an-information-system-information-systems-introduction/

Bourgeois, D. B. (2014). *Chapter 1: What is an information system? - Information Systems for Business and Beyond*. Retrieved from Pressbooks: https://pressbooks.pub/bus206/chapter/chapter-1/

Contributor, T. (2023, May). *What is information systems (IS)?* Retrieved from Tech Target: https://www.techtarget.com/whatis/definition/IS-information-system-or-information-services

edX, M. i. (2020, July). *What is an Information System?* Retrieved from Masters in Data Science: https://www.mastersindatascience.org/learning/what-is-an-information-system/

Emeritus. (2023, September 04). *What is Information System? Definition, Examples, & Facts*. Retrieved from Emeritus: https://emeritus.org/in/learn/information-system/

Gregersen, E. (2018, March 19). *5 Components of Information Systems*. Retrieved from Britannica: https://www.britannica.com/story/5-components-of-information-systems

Juneja, P. (n.d.). *Different Types of Information Systems and their Components*. Retrieved from Management Study Guide: https://www.managementstudyguide.com/types-of-information-systems.htm

skc161931. (2023, January 5). *Components Of Information System*. Retrieved from Geeksforgeeks: https://www.geeksforgeeks.org/components-of-information-system/

Wikipedia. (2023, August 24). *Information System*. Retrieved from Wikipedia: https://en.wikipedia.org/wiki/Information\_system

Wikipedia. (2023, September 7). *Sytem - Wikipedia*. Retrieved from Wikipedia: https://en.wikipedia.org/wiki/System