USC - Talamban

Computer Hardware and Software

Presented by John Paul E. Tautuan
BSIT - 1

Portfolio #4

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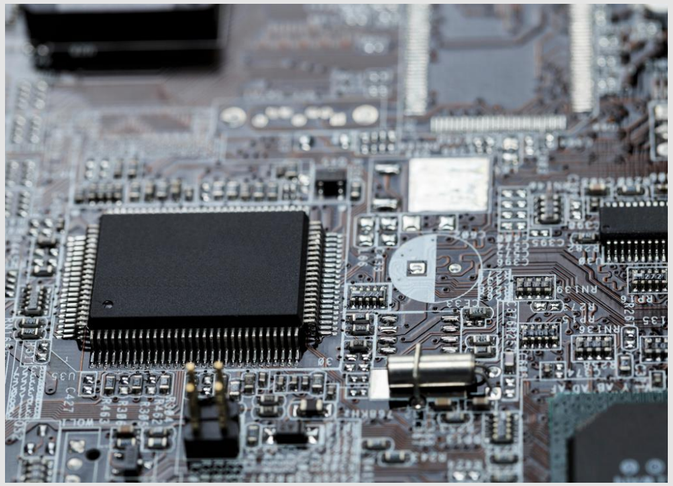
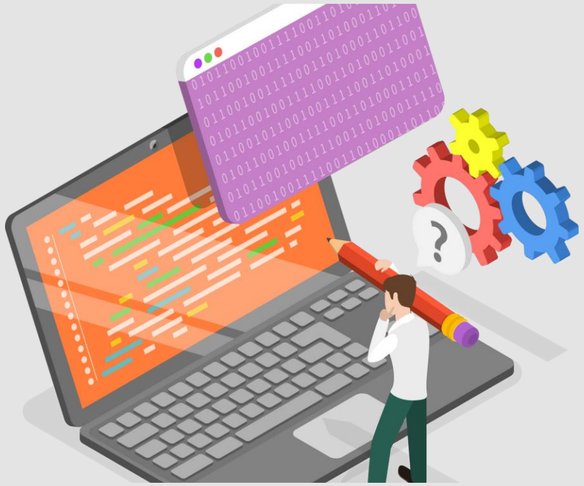
Hardware vs Software

Hardware



- Pertains to the physical components present in a computer that physically carry out the workload.

Software



- Refers to the non-physical programs and procedures that tell the hardware what to do.

Hardware

Hardware

- refers to the physical components of a computer system—such as the processor, memory, storage devices, and input/output peripherals—that work together to perform computing tasks and execute the instructions provided by software. The major components of computer hardware include the Central Processing Unit (CPU), which processes and controls data, memory (RAM), which temporarily stores information, storage devices, which keep data permanently, the motherboard, which connects all components, the power supply unit (PSU), which provides electricity, input devices, which allow data entry, output devices, which display results, and peripheral devices, which adds extra functionality to the system.

Hardware

Software

- refers to the non-physical programs and procedures that instruct the hardware on what tasks to perform. It is generally divided into three main types: system software, which manages and operates the computer’s hardware and includes operating systems and device drivers, utility software, which helps maintain and optimize the system’s performance, such as antivirus and file management tools, and application software, which allows users to perform specific tasks like creating documents, analyzing data, or designing graphics using programs such as word processors and spreadsheets.

Types of Software

System Software

- Manages and controls computer hardware, enabling the system and applications to run; examples include operating systems (Windows, macOS, Linux) and device drivers.

Utility Software

- Performs maintenance and optimization tasks to ensure smooth system performance; examples include antivirus programs, file compression tools, and disk cleanup utilities.

Application Software

- Allows users to complete specific tasks or activities; examples include word processors, spreadsheets, web browsers, and graphic design programs.

Analysis

Computers are the single greatest invention mankind has conceived within the last century. Naturally, a complex construct would be composed of multiple parts facilitating the processes involved in computing. These components are categorized as “hardware” and “software”. The computer hardware pertains to the physical components present in a computer. These include but are not limited to, the central processing unit or the CPU, memory, permanent storage, the motherboard, the power supply, the input and output device and peripherals. There are a multitude of parts omitted such as the dedicated graphics card and much more but the parts enumerated are the most vital components to a computer. Software, on the other hand, refers to the non-physical programs and procedures that tell the hardware what to do. These are split into three types of software, namely, system software which includes operating systems and device drivers, utility software which includes antivirus software, and application software which includes word processors and spreadsheets. Each part of the hardware and software work in tandem to facilitate the needs and processes a user may require. Computers have been employed in many sects of society. Companies use computers in their servers and in storing user data, universities employ computers in their computer labs and in management systems, hospitals use computers to record patient information and index them. The possible applications of this modern marvel cannot be quantified. This single construct has increased the quality of life of people around the globe in ways they haven’t conceived. So, as this invention stands at the forefront of human innovation, I am truly appalled at its impact.

References

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Thank You

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