

NAME: TANKISO MASOEBE

WK3

08/09/2025

1.

An IT support technician is tasked with upgrading an office computer to improve speed and efficiency. The process begins with assessing the motherboard, which acts as the central hub connecting all components. It determines compatibility with the CPU, RAM, and storage devices, so the technician ensures the new parts fit the existing board or recommends a replacement. The CPU, often described as the “brain” of the computer, is upgraded to a faster model, enabling quicker processing of tasks and smoother multitasking. Next, the technician installs additional RAM, which provides temporary memory for running applications. More RAM allows the system to handle multiple programs without slowing down. Finally, the technician replaces the old hard drive with a solid-state drive (SSD), greatly improving boot times and file access speeds. This upgrade demonstrates how understanding hardware roles ensures IT staff can optimize systems for better performance

A Solid-State Drive (SSD) plays a crucial role in modern IT systems by providing fast, reliable, and efficient data storage. Unlike traditional hard drives, SSDs use flash memory, enabling rapid data access, shorter boot times, and quicker application performance. In IT support, SSDs are often used to upgrade existing systems, significantly improving speed and productivity without requiring major hardware changes. Their durability, with no moving parts, reduces the risk of mechanical failure and data loss, making them ideal for business environments. Overall, SSDs enhance system efficiency, reliability, and user experience, supporting the growing demands of modern IT operations.

3. Using CPU-Z to analyze a computer’s CPU and RAM provided valuable insights into system performance and hardware capabilities. The CPU tab displayed details such as the processor name, number of cores, threads, clock speed, and cache size. Understanding these specifications helped me see how the CPU acts as the “brain” of the system, influencing multitasking ability and overall speed. For example, higher clock speeds and multiple cores support running demanding applications smoothly.

4. The diagram shows the connection between three key computer components: the motherboard, CPU, and RAM. The motherboard is the main circuit board that links all hardware parts, allowing them to communicate effectively. The CPU, or Central Processing

Unit, is attached to the motherboard and acts as the brain of the computer, processing instructions and performing calculations. RAM, or Random Access Memory, is also connected to the motherboard and stores temporary data that the CPU needs while running applications. Together, these components work in constant communication, ensuring smooth performance, fast processing, and efficient multitasking in a computer system.

