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**Linkers: 10, Vocabulary: 23, Total: 603**

**Spring 2023-2024 Term 4**

**ИКНТ/ИКиЗИ/ФизМех**

**Monologue on *OPERATING SYSTEMS (UNIT 3)***

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| **Step 1. Introduction**  1. Start with a hook sentence that will attract the listener’s attention, a quote, a proverb, etc.  2. Lead your speech steadily to the main part of your talk.  3. The introduction may consist of 3-6 sentences. | Imagine the world of technology as a grand symphony, with each device playing its own unique tune. And at the heart of this symphony, orchestrating the harmonious collaboration of hardware and software, are operating systems. As Bill Gates once said, 'The operating system is the most important piece of software on your computer.' Indeed, these silent guardians of our digital realm quietly govern our devices, ensuring seamless functionality and optimal performance. |
| **Step 2. How do computers work?**  2.1. What is an OS?  2.2. Types of OS (GUI, Multi-user, Multiprocessing, Multithreading, Multitasking). What are they? | An operating system (OS) is software on the hard drive that enables the computer hardware to communicate and operate with the computer software. There are different types of operating systems:  GUI: A Graphical User Interface (GUI) operating system allows users to interact with the computer using graphics and icons.  Multi-User: A multi-user operating system allows multiple users to use the same computer at the same time and at different times.  Multiprocessing: A multiprocessing operating system supports and utilizes more than one computer processor.  Multitasking: A multitasking operating system allows multiple software processes to run at the same time.  Multithreading: A multithreading operating system allows different parts of a software program to run concurrently. |
| **Step 3. What do OS do?**  3.1. Why is an OS one of the most important parts of a computer?  3.2. Speak about the tasks operating systems must accomplish. | An operating system (OS) is one of the most crucial components of a computer as it performs various essential tasks. Firstly, the OS controls the computer's and system resources, managing hardware components like the CPU, main memory, and storage. It must be adaptable to different uses, catering to the diverse needs of users. The OS provides a consistent application program interface (API) for software developers to create programs that can run smoothly on the system.  Moreover, the OS is responsible for resource allocation, ensuring that each process and application receive enough of the processor's time and memory to run efficiently. It can handle multiple applications and processes running simultaneously, balancing their needs with the available memory types. Additionally, the OS translates electrical signals between the software and hardware devices, enabling seamless communication and operation. |
| **Step 4. History of OS**  4.1. Speak about the generations of operating systems.  4.2. Compare two modern OS. | Operating systems have evolved significantly over the years, starting from the days of entering programs one bit at a time on rows of mechanical switches to the modern era of sophisticated multitasking systems.  One of the early generations of operating systems was the (single-stream) batch processing system, which allowed users to submit programs and data in groups or batches for processing. As technology advanced, operating systems developed the concept of multiprogramming, allowing them to run several jobs at once at once and keep peripheral devices in use.  In comparison, two modern operating systems that showcase these advancements are Windows and Linux. Both systems are compatible with a wide range of software and hardware, offering users flexibility and customization options. Windows is known for its user-friendly interface and extensive support for various applications, while Linux is renowned for its stability, security, and open-source nature. |
| **Step 5. CREATIVE THINKING**  Introduce your own extra idea(s) on advertising that hasn’t/haven’t been mentioned before. Substantiate your choice. | One innovative feature for an operating system is a personalized AI assistant that learns user habits and preferences to provide tailored recommendations, automate tasks, and enhance productivity. By leveraging machine learning and natural language processing, this AI assistant could streamline daily tasks, improve efficiency, and revolutionize user-device interaction by, for example, searching for media that fits in user`s preferences or doing tedious and monotonous jobs. |
| **Step 6. Conclusion**  Summarise the ideas of steps 2,3,4,5. | In conclusion, operating systems are the unsung heroes of the technological world, orchestrating the symphony of hardware and software that powers our devices. From managing system resources to enabling multitasking and providing a seamless user experience, operating systems play a crucial role in the functionality and performance of our computers. As technology continues to evolve, operating systems will likely continue to adapt and innovate, shaping the way we interact with our devices and enhancing our digital experiences. |