OS QA

1. **What is a file? Which type of information is stored in a file?**
   A file is a collection of related information or data that is stored in a computer system. Files can contain a variety of different types of information, such as text, images, audio, video, and program code.
2. **List out operations performed on a file.**
   Some of the common operations performed on files include creating, opening, reading, writing, renaming, copying, moving, deleting, and modifying file attributes such as permissions and timestamps.
3. **Explain the role of the kernel in an operating system.**
   The kernel is the core component of an operating system that manages system resources such as memory, CPU, and input/output devices. It also provides a layer of abstraction between hardware and software, allowing applications to interact with hardware resources in a standardized and controlled way.
4. **Differentiate between SCAN and C-SCAN disk scheduling policy.**
   SCAN (elevator) disk scheduling policy services requests in the order that they are received, scanning back and forth across the disk to service requests on both sides of the current head position. C-SCAN disk scheduling policy services requests in a circular fashion, scanning from one end of the disk to the other and then returning to the start of the disk to begin again.
5. **List out the basic features of Linux.**
   Linux is an open-source operating system that is known for its stability, security, and flexibility. Some of its key features include a modular design, a robust command-line interface, support for multiple users and multitasking, and a vast library of free and open-source software packages.
6. **What are the main objectives of an operating system?**
   The main objectives of an operating system are to manage system resources efficiently, provide a user-friendly interface for interacting with the system, ensure system security and stability, and support the execution of user applications and programs.
7. **What is an operating system? What is the primary goal of an operating system?**
   An operating system is a software program that manages the hardware and software resources of a computer system. The primary goal of an operating

system is to provide a stable, secure, and efficient environment for running user applications and programs.

8. **Define multitasking operating system.**
   A multitasking operating system is one that allows multiple tasks or processes to run simultaneously on a computer system, sharing system resources such as CPU, memory, and input/output devices.

9. **What is the role of the shell in a Linux OS?**
   The shell is a command-line interface that provides a user-friendly way to interact with a Linux operating system. It interprets user commands and executes them on the system, allowing users to perform tasks such as creating and managing files, launching programs, and configuring system settings.

10. **Differentiate between LOOK and C-LOOK disk scheduling policy.**
    LOOK disk scheduling policy services requests in the order that they are received, scanning back and forth across the disk to service requests on both sides of the current head position. C-LOOK disk scheduling policy services requests in a circular fashion, scanning from one end of the disk to the other and then immediately returning to the starting point to begin again.

11. **Explain a batch operating system.**
    A batch operating system is a type of operating system that processes large volumes of data in batches, without user intervention. Jobs are submitted to the system in batches, and the operating system schedules and executes them in the order they were received, often overnight or during periods of low system usage.

12. **Define absolute and relative paths.**
    An absolute path specifies the complete directory path from the root directory to a file or directory, starting with a forward slash (/) on Unix-based systems. A relative path specifies the directory path from the current working directory to a file or directory, without the need for a leading slash.

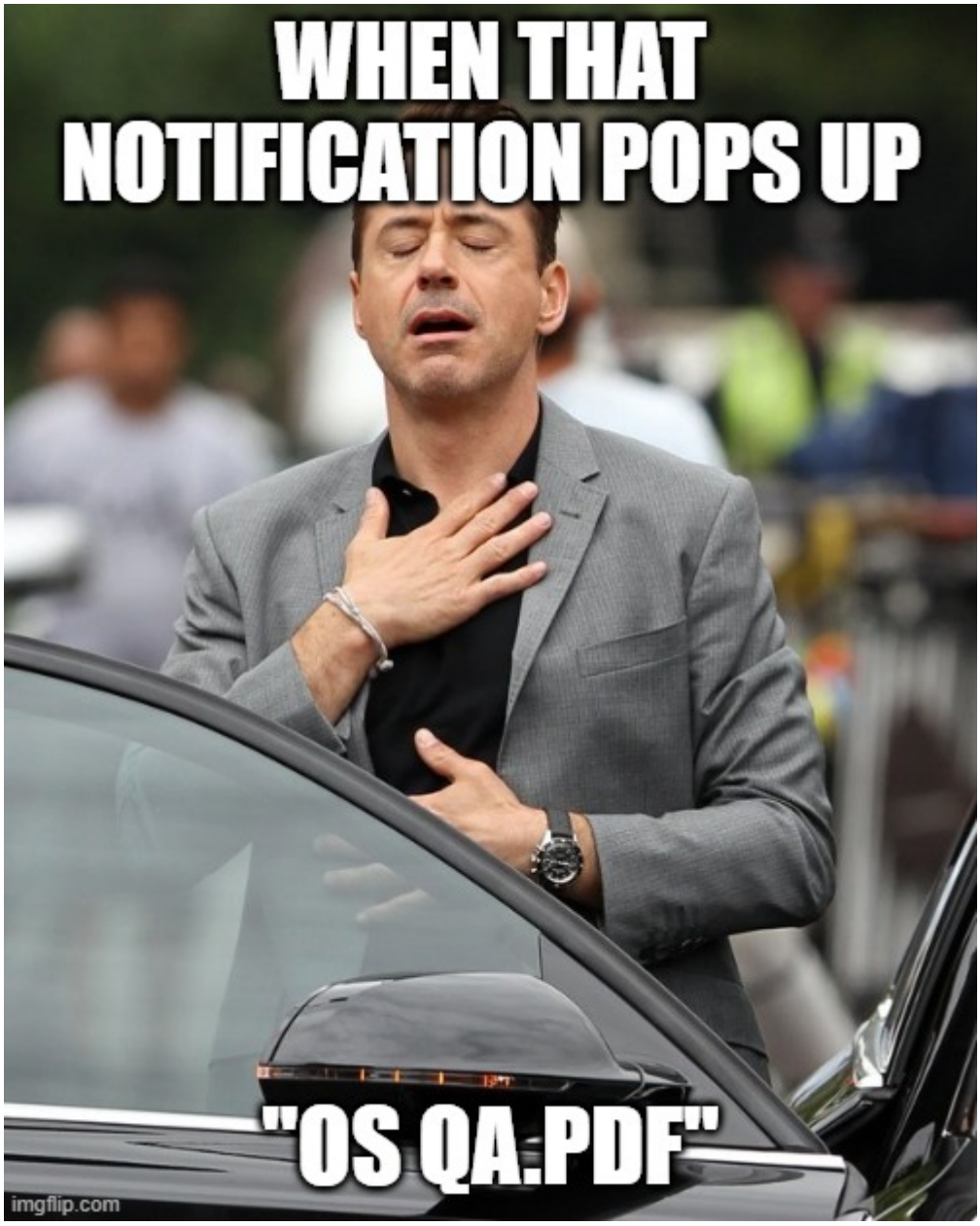
13. **What is a time-sharing operating system?**
    A time-sharing operating system is a type of operating system that allows multiple users to share a single computer system simultaneously, with each user having access to the system's resources for a short period of time. This allows multiple users to work on the same system at the same time, making the most efficient use of the system's resources.

14. **What do you mean by spooling?**
    Spooling stands for Simultaneous Peripheral Operations On-Line. It is a technique used in computer systems to improve the performance of input/output operations by using a buffer to temporarily store data from input/output devices such as printers or disk drives. This allows the system to continue processing other tasks while the input/output device completes its operation.
15. **What is an operating system? List down types of operating system.**
    An operating system is a software program that manages the hardware and software resources of a computer system. Some types of operating systems include:
    - Windows
    - Linux
    - macOS
    - Unix
    - Android
    - iOS
16. **Differentiate between kernel mode and user mode in Linux.**
    Kernel mode is a privileged mode in which the operating system kernel has unrestricted access to system resources, such as memory and input/output devices. User mode is a non-privileged mode in which user applications and programs execute, with limited access to system resources and without the ability to directly access hardware.
17. **List out device characteristics.**
    Some common device characteristics include:
    - Device type
    - Device capacity
    - Data transfer rate
    - Access time
    - Response time
    - Compatibility with other devices and systems
18. **List out types of file allocation method.**
    Some types of file allocation methods include:

- Contiguous allocation
- Linked allocation
- Indexed allocation

19. **What do you mean by real-time operating system?**
    A real-time operating system (RTOS) is a type of operating system designed to provide predictable and deterministic response times to system events. RTOSs are often used in systems that require rapid and precise response times, such as in industrial control systems, robotics, and aerospace systems.
20. **List out file attributes.**
    Some common file attributes include:

- File name
- File size
- File type
- File permissions
- Creation date
- Modification date
- Access date
- Owner and group information
- File location/path



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