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Questions

Unix

1. What are the names of three authoritative accounts usable in Unix?
   1. Administrative accounts, special account, and root accounts
2. What would appear to be a single thread is actually multiple. How many are there and what are they?
   1. There are two. A kernel thread and a user thread
3. What are the two types of devices contained in Unix?
   1. Block devices and Character (Raw) devices
4. What does Unix use to identify its files?
   1. Inodes
5. The BSD system was the first implementation of what memory managing policy?
   1. Demand Paging Policy

Android

1. What unique scheduling algorithm does this operating system use?
   1. Completely Fair Scheduling
2. What is the name of the inter-process communication model used in Android?
   1. Binder
3. What does the Out-of-memory killer do in Android?
   1. When RAM becomes low, the out-of-memory killer runs to release RAM from elsewhere.
4. What is one purpose of a “daemon” thread in Android?
   1. To call the “main” method
5. What does Android use for placing devices into sleep mode?
   1. Wake locks

Mac OS X

1. How can support for additional file systems be added to Mac OS X?
   1. The use of OS X Virtual File System
2. What are the three major conceptual elements Mac OS X’s I/O kit?
   1. Families, nubs, and drivers
3. What are the two mechanisms that Mac OS X use for synchronization?
   1. Locks and semaphores
4. What does real-time priority allow a thread to do?
   1. Inform how much clock time it will need to run
5. How does this operating system handle deadlock?
   1. Prevention

iOS

1. What does the power plane display?
   1. Models power dependencies of its computer’s components, with each driver being represented as a node.
2. What is the standard file system?
   1. HFS+
3. iOS uses the same security model as which other operating system?
   1. Unix
4. The power management is handled by which other component of its system?
   1. I/O kit
5. What process scheduling algorithm does iOS use?
   1. Round Robin with Multilevel Feedback.

Windows

1. Thereotically, how large can disk partitions be for Window’s NT file system?
   1. 2^64 bytes
2. What are the three most important file systems that Windows support?
   1. FAT 16, FAT 32, and NTFS
3. What are the five inter-process communication methods in Windows?
   1. Pipes, mailslots, sockets, remote procedure calls, and shared files
4. What does Window’s I/O system consist of?
   1. Plug-and-play services, device power manager, I/O manager, and device driver
5. What is the purpose of Win32 thread pool?
   1. Allocates a limited number of threads and keeps a queue of tasks that need to be ran

OS 360/370

1. In its inception, what type of partitioning did OS 360 use?
   1. Single-partition allocation
2. Why was the safeguarding of data limited to only a password?
   1. Lack of user management
3. What are the two scheduling algorithms that OS 360/370 allows?
   1. Sequential FIFO and non-preemptive priority scheduling
4. What type of operating system was OS 360?
   1. It was a batch system operating system
5. How would OS 360 “recover” from deadlock?
   1. Wait 30 minutes before canceling the jobs.

Ubuntu

1. What are the functionalities of the four states of Ubuntu’s ACPI?
   1. S1 maintains power to CPU and RAM while most devices are powered down. S2 powers off the CPU. S3 puts RAM on standby. S4 saves RAM to hard drive and powers down the machine.
2. What tool does Ubuntu encourage its users to use for system administrative duties?
   1. Sudo
3. What is the default file system for Ubuntu?
   1. NTFS
4. What is the function of Ubuntu’s gnome-power-manager?
   1. Shows battery life and can shut down, hibernate, or dim screen under certain conditions.
5. What is the minimum number of characters that an Ubuntu password must have?
   1. six

Multics

1. What was the first process scheduler created by Multics?
   1. Foreground – Background Scheduler
2. What was the process scheduler created by Multics in 1975?
   1. Percentage Scheduler
3. What was the improved process scheduler developed over 1975-1976 by Bob Muller?
   1. Deadline Scheduler
4. What is the software used for I/O management in Multics?
   1. Input/Output Control System
5. What is the name of the set of tables that list the users and their access rights to data?
   1. Access Control List