Quiz

Dec 11, 2024

多选题 4分

设置

Which of the followings is/are true about page replacement policies?

A LRU is always better than FIFO in terms of page fault numbers, whichever reference string is considered.

B MIN is always better than LRU in terms of page fault numbers, whichever reference string is considered.

C When approximating LRU with reference bit, the reference bits are set by the CPU and cleared by the OS.

D The N^{th} chance clock algorithm is a good approximation of LRU, if N is large enough.

提交

填空题 2分

设置

If memory access latency is 500ns, and the page fault handling time is 5ms, if the effective access time leads to a slowdown of less than 100%, the page fault rate is approximately [填空1] % .

作答

多选题 4分

设置

In an inode file system, each inode has 256 bytes, with 10 direct block pointers, 2 single indirect block pointers, and 1 double indirect block pointers. A block pointer takes 8 bytes. The block size is 8KB. Which of the followings is/are correct

A The maximum size of a file in this file system is roughly 8GB.

B The maximum size of a file in this file system is roughly 1GB.

C The maximum size of the file system is roughly 2^{77} B.

D The maximum size of the file system is roughly 2^{64} B.

提交

多选题 4分

设置

Which of the following(s) is/are true about hard links and soft links in an iNode file systems?

A A hard link is a directory entry pointing to the iNode of an existing file.

B A symbolic link creates a new inode, with the path to the target file in its inode or data block.

C Deleting the target file makes the soft link invalid.

D Deleting the target file does not affect the soft link.

提交

多选题 4分

设置

Which of the following(s) is/are true about FAT file systems and ext2/3 file systems?

A FAT32 file system stores the file name in the FAT table and the file attributes in the directory entries.

B Ext2/3 file system stores the file name in the directory entries, and the file attributes in the inode.

C FAT32 stores file names and attributes in the directory entries.

D Ext2/3 stores file names and attributes in the inodes.

提交

多选题 4分

设置

Which of the following is/are true about safe state and deadlock state?

A If the system is in an unsafe state, it must also be in a deadlock state.

B If the system is in an unsafe state, there must be circular wait.

C If the system is in a safe state, it cannot be in a deadlock state.

D If the system is in a safe state, it may transit to a deadlock state in the future.

提交

多选题 4分

设置

Which of the following is/are true about deadlock prevention and deadlock detection?

A Banker’s algorithm is a deadlock prevention algorithm that ensures there is no circular wait in the system.

B Banker’s algorithm impose a total ordering of all resource types, and require that each process requests resources in an increasing order.

C Deadlock detection requires proper deadlock handling, which is challenging in practice.

D Resource allocation graph can be used for deadlock detection, because circular wait always means deadlock.

提交