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CS420

HW1

To be submitted in class.

1) What is the purpose of a system call?

The system call requests the operating system to wait until the I/O task finishes before continuing, so that the user’s input can be used in the program where you need it.

2) Describe three general methods for passing parameters to the operating system.

-pass parameters in registers

-store them in a block and pass in the entire block

-push/pop behavior on the stack

3) What are the two models of interprocess communication? What are the strengths and weaknesses of the two approaches?

-Message passing

-regulated by the kernel, less chance of errors

-because of the extra steps, it’s slower

-shared memory

-Faster because less steps are involved

-no mediation so errors may occur, like race conditions

4) What are some of the advantages of the microkernel approach to system design? What are some of the disadvantages of using the microkernel approach?

Advantages:

-easier to extend

-easier to port the OS to new architectures

-reliability

-secure

Disadvantages:

-performance overhead