

Homework: OS Organization

This lecture will provide an introduction to operating system organizations, monolithic, microkernel, etc. The assigned paper describes the exokernel organization. The JOS operating system you are building in the labs is organized like an exokernel.

Submit: In lab 4 you completed building the core of an exokernel-based operating system. In class you studied xv6, a monolithic operating systems. Both are intend to support the UNIX API, but their internal organizations are different. A good example is the virtual memory implementation: JOS implements many virtual-memory-related functions (such as `fork`) in its library operating system, while xv6 implements them in the kernel. Give an concrete example of what a user program could do in JOS that a user-level program on xv6 is unable to do and why it is useful.

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