

Lab One

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1 QUESTION ONE

1.1 WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF USING THE SAME SYSTEM CALL INTERFACE FOR MANIPULATING BOTH FILES AND DEVICES?

A large advantage to sharing the same system call interface is the API is significantly smaller. Since the commands are shared, there will just be less of them to be concerned with. This also means that less space is required for storing this information.

A huge problem with sharing the same system call interface is that, because all of the calls are sharing the same resources, the system can get deadlocked pretty quickly. Devices alone, whether physical or abstract, already compete with each other for important resources such as memory, so if file usage is now also added, it only crowds to plain that much more.

2 QUESTION TWO

2.1 WOULD IT BE POSSIBLE FOR THE USER TO DEVELOP A NEW COMMAND INTERPRETER USING THE SYSTEM CALL INTERFACE PROVIDED BY THE OPERATING SYSTEM? HOW?

Theoretically, yes, a user should be able to build a new command interpreter using the system call interface provided by the operating system.

The idea here would be to emulate (and presumably customize) certain functionality by grouping together similar system calls to replicate specific behaviors. Taken altogether, it could create a new command interpreter.