

Lab One

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1 PROBLEM ONE

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

Using the same system calls in order to manipulate both files and devices results in the devices being accessed as a file. The advantage to this is that the code to access both files and devices would be the same. The disadvantage to this approach is that it might be difficult to recreate the functionality of some devices, and there can be a loss in performance.

2 PROBLEM 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?

Yes, a user can develop another command interpreter using the system call interface provided by the operating system. The user can access all the functionality of creating and managing processes, so a user level program can use the system calls to develop a new command-line interpreter.