

# Homework questions for the lab 1

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September 27, 2018

**Problem Write in LaTeX.** Make a commitment to serious computer science and write up your answers in LaTeX. Commit both the .tex source and the compiled .pdf of with answers to GitHub. 1. What are the advantages and disadvantages of using the same system call interface for manipulating both files and devices? 2. Would it be possible for the user to develop a new command interpreter using the system call interface provide by the operating system? How?

*Proof.* 1-

Since using the same system-call interface for manipulating both files and devices allows to access each device like it was a file system. It is possible to add a new device driver by simply adding the code to support the device file interface. We can conclude that one of the main advantages of using the same system-call interface for both files and devices is the development of the program code (access to device and file) and also device-driver code (API support).

It can work against the user to use recurrent same interface in terms of performance and functionality. Indeed this occurs because it becomes harder to identify all the functionality of a lambda device due to its context of the file access API.

2-

It is possible for an user to develop a new command interpreter using the system-call interface provided by the operating system. Indeed because it is possible to create and manage processes and their communication using system calls (Similar to ability of using these functions due to an user level program with system calls).  $\square$