# Lab One

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## 1 Problem One

What are the advantages and disadvantages of using the same system call interface for manipulating both files and devices?

Using the same system call interface will allow devices to be accessed as a file in the file system. This is beneficial as it enables the user program code to access devices as well as the files with the same process apart from some changes within the parameters. New device drivers can also be implemented by simply rewriting it to support API. Some benefits of API over system call includes the support of multiple versions of the OS and providing more helpful functionalities. When it comes to disadvantages, the loss of full functionality and performance can incur due to file access API as the system might not be able to grab the full functionality of the device.

## 2 Problem Two

Would it be possible for the user to develop a new command interpreter using the system call interface provide by the operating system? How?

Program interactions with the OS require system calls which will requests a service from the kernel. The command interpreter or shell is used to translate user inputs in order to perform the command within the OS. This means that the shell is built on system calls. Thus, with a user level program, a user can develop a new command interpreter as the functionalities of the command interpreter can be implemented through system calls.