Marist College

Lab Report

Lab 01

Course Information

Professor	-	Alan Labouseur
Course Name	-	Operating System
Course Code	-	CMPT424N 620 20F

Name	-	Ryan Pepe
Student ID	-	20096073
Department	-	Computer Science & Mathematics
Date of Submission	-	September 1, 2020

Contents

1 Questions

1. 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 for manipulating both files and devices is a very useful because it can reduce the complexity of the OS. This method would allow IO devices to be accessed in a similar way to the way that files are accessed. For example, there could be a similar method for opening or reading information from a file or device: `open()` or `read()`. On the other hand, using the same system call interface forces devices and files to be managed the same way. For this reason, there might be certain aspects of the file management / IO device management that are lost due to the API.

2. Would it be possible for the user to develop a new command interpreter using the system call interface provided by the operating system? Why?

   Yes, it is possible for the user to develop a new command interpreter using the system call interface. In fact, we are currently working on that in our semester project. The system call interface can be accessed by the user; therefore, the user can access the kernel through a series of interrupts brought forth by these system calls. The command-line interpreter is merely a method executing system calls to make changes to the system through the kernel. After all, **kernel is god.**