**COMPSCI 3SH3 Winter, 2021**

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**Lab 1 Report**

**Q1 - Jiffies**

*Module Description*

The Jiffies kernel module creates a file, *jiffies*,in the *proc/* directory when it is loaded. Then, when the file is read, the current value of *jiffies* is retrieved and printed to the file. This occurs whenever the *jiffies* file is read (*i.e., cat /proc/jiffies*). The Jiffies value is retrieved from the *jiffies.h* header file, which is a library containing the value. For more information, please reference the source code files attached, namely *proc\_jiffy.c*.

Most of the code was licensed from "Operating System Concepts - 10th Edition", under the GPL license, which allows end users the freedom to run, study, share, and modify the software.

*Source Code*

proc\_jiffy.c1, (Makefile1)

1Source code can be found in the standalone files attached.

**Q2 - Seconds**

*Module Description*

The Seconds kernel module creates a file, *seconds* in the *proc/* directory when it is loaded. In addition, the moment the Seconds kernel module is loaded, the current value of Jiffies is retrieved from *jiffies.h* and stored. Then, when the file *seconds* is read, (*i.e., cat /proc/seconds*), the following information is printed to the *seconds* file:

* Initial Jiffies
* Current Jiffies
* HZ
* Time Elapsed

The *Time Elapsed* value is the most important value here. It represents the time elapsed since the module was initially loaded and the moment the *seconds* file was read. The value outputted is measured in seconds. For more information, please reference the source code files attached, namely *proc\_seconds.c*.

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*Source Code*

proc\_seconds.c1, (Makefile1)

1Source code can be found in the standalone files attached.