

COMPSCI 3SH3 Winter, 2021

January 22, 2021

Lab report due date: January 29th 2021, 11:59:59 pm

Lab Assignment 1 - Kernel Module Design

You need to create two kernel modules. The implementation has to be completed during lab time. Once it is done you have to

- a) Show your solution to TA
- b) Answer all questions related to the implementation details

Your lab report should contain a short description of the implementation and source code. The report should be submitted on Avenue.

Questions

1) Design a kernel module that creates a `/proc` file named `/proc/jiffies` that reports the current value of *jiffies* when the `/proc/jiffies` file is read, such as with the command

```
cat /proc/jiffies
```

Be sure to remove `/proc/jiffies` when the module is removed.

2) Design a kernel module that creates a `proc` file named `/proc/seconds` that reports the number of elapsed seconds since the kernel module was loaded. This will involve using the value of *jiffies* as well as the *HZ* rate. When a user enters the command

```
cat /proc/seconds
```

your kernel module will report the number of seconds that have elapsed since the kernel module was first loaded. Be sure to remove `/proc/seconds` when the module is removed.