COMP3000 - Exercise 4 (Individual)
Device Driver - Special Device

Winter 2018

Build a module that creates a special character device named `/dev/<your 1st name here>_prime`, for example `/dev/michel_time()`.[1] The entry must use a dynamically allocated major device number. It must behave as if it were an infinitely long file filled with successive prime numbers. As much data as you would ty to read from `/dev/prime`, the system generates enough successive prime numbers starting from number 2. Using the test program `test.c`, you should observe the following behavior:

```
$ sudo insmod michel_prime.ko
$ ls -l /dev/michel_prime
crw------- 1 root root 244, 0 Jan 29 14:45 /dev/michel_prime
sudo ./test 5
test started
Reading 5 prime number(s)
2
3
5
7
11
$ sudo ./test 100
test started
Reading 100 prime number(s)
2
3
5
...
523
541
$ sudo rmmod michel_prime.ko
$ ls -l /dev/prime
ls: cannot access '/dev/prime': No such file or directory
```

[1] Use your cuLearn first name.

When the module is uninstalled, the special character device must be removed from the system.

Due date: February 11. Submit you work on cuLearn. This exercise must be done in the C programming language under Linux kernel 4.4 (Ubuntu 16.04 has it). Submit a single *tar.gz* file. You are responsible for the completeness of your submission. You are responsible for submitting your work on time. Source code and a make file must be included. Submissions that do not compile are not accepted.