Assignment 1
CS-370 (Operating Systems)

Roll No: 23100174

Part I (simple.c):

[screenshot of dmesg command after adding and removing simple.ko. Should show the golden ratio, gcd values, jiffies, and HZ value]

```
Activities      Terminal ▼                                    Sat  3:15 PM

                        oscreader@OSC: ~/Desktop/final-src-osc10e/ch2                              ×

File  Edit  View  Search  Terminal  Help
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo dmesg -c
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ make
make -C /lib/modules/3.16.0-4-686-pae/build M=/home/oscreader/Desktop/final-src-osc10e/ch2 modules
make[1]: Entering directory '/usr/src/linux-headers-3.16.0-4-686-pae'
Makefile:10: *** mixed implicit and normal rules: deprecated syntax
make[1]: Entering directory `/usr/src/linux-headers-3.16.0-4-686-pae'
  Building modules, stage 2.
  MODPOST 1 modules
make[1]: Leaving directory '/usr/src/linux-headers-3.16.0-4-686-pae'
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo insmod simple.ko
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ dmesg
[ 6637.736428] Loading Module
[ 6637.736430] 2654404609
[ 6637.736431] 250
[ 6637.736432] 1582196
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo rmmod simple
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ dmesg
[ 6637.736428] Loading Module
[ 6637.736430] 2654404609
[ 6637.736431] 250
[ 6637.736432] 1582196
[ 6647.995744] Removing Module
[ 6647.995746] 12
[ 6647.995747] 1584761
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ 
```

Part II (jiffies.c):

[screenshot of *cat /proc/jiffies* command (after loading jiffies module in the kernel) followed by dmesg command after removing jiffies.ko]

oscreader@OSC: ~/Desktop/final-src-osc1Oe/ch2   ✕

File Edit View Search Terminal Help

```
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo dmesg -c
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ make
make -C /lib/modules/3.16.0-4-686-pae/build M=/home/oscreader/Desktop/final-src-osc10e/ch2 modules
make[1]: Entering directory '/usr/src/linux-headers-3.16.0-4-686-pae'
Makefile:10: *** mixed implicit and normal rules: deprecated syntax
make[1]: Entering directory `/usr/src/linux-headers-3.16.0-4-686-pae'
  Building modules, stage 2.
  MODPOST 1 modules
make[1]: Leaving directory '/usr/src/linux-headers-3.16.0-4-686-pae'
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo insmod jiffies.ko
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ cat /proc/jiffies
1616883
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo rmmod jiffies
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ dmesg
[ 6772.575968] /proc/jiffies created
[ 6783.290927] /proc/jiffies removed
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ ▯
```

Part III (seconds.c):

[screenshot of at least 3 calls to *cat /proc/seconds* command (after loading seconds module in the kernel) followed by dmesg command after removing seconds.ko]

oscreader@OSC: ~/Desktop/final-src-osc1Oe/ch2   ✕

File Edit View Search Terminal Help

```
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo dmesg -c
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ make
make -C /lib/modules/3.16.0-4-686-pae/build M=/home/oscreader/Desktop/final-src-osc10e/ch2 modules
make[1]: Entering directory '/usr/src/linux-headers-3.16.0-4-686-pae'
Makefile:10: *** mixed implicit and normal rules: deprecated syntax
make[1]: Entering directory `/usr/src/linux-headers-3.16.0-4-686-pae'
  Building modules, stage 2.
  MODPOST 1 modules
make[1]: Leaving directory '/usr/src/linux-headers-3.16.0-4-686-pae'
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo insmod seconds.ko
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ cat /proc/seconds
5
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ cat /proc/seconds
9
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ cat /proc/seconds
13
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ cat /proc/seconds
17
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ sudo rmmod seconds
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ dmesg
[ 7625.927708] /proc/seconds created
[ 7647.262034] /proc/seconds removed
oscreader@OSC:~/Desktop/final-src-osc10e/ch2$ []
```