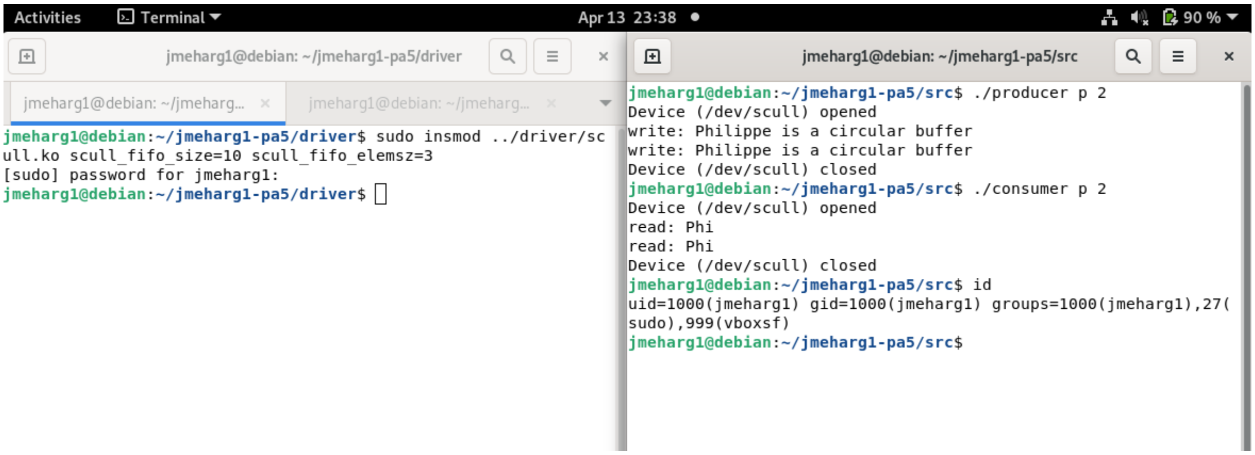
Joshua Meharg

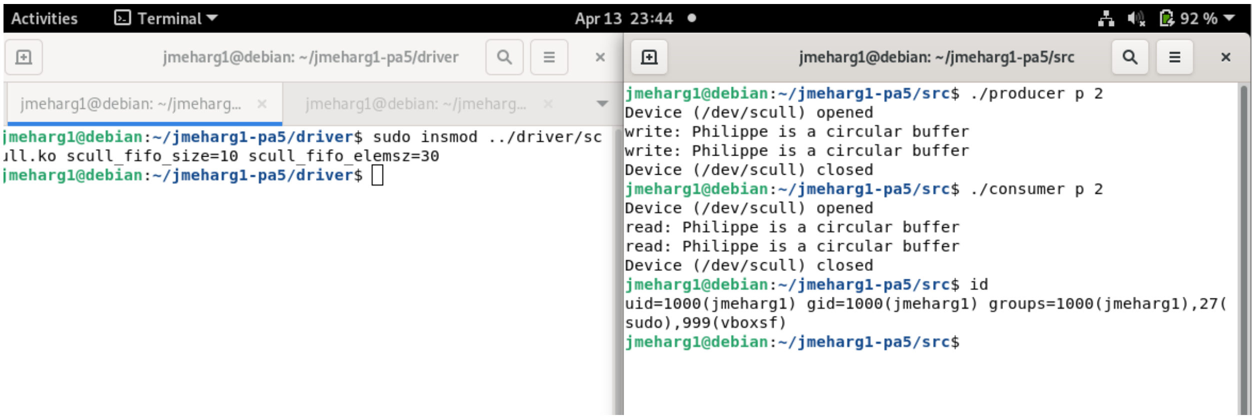
I pledge my honor I have abided by the Stevens honor system


Activities
Terminal
Apr 13 23:38
90 %
jmeharg1@debian: ~/jmeharg1-pa5/driver
jmeharg1@debian: ~/jmeharg...
jmeharg1@debian: ~/jmeharg...
jmeharg1@debian: ~/jmeharg1-pa5/src

```
jmeharg1@debian:~/jmeharg1-pa5/driver$ sudo insmod ../driver/sc
ull.ko scull_fifo_size=10 scull_fifo_elemsz=3
[sudo] password for jmeharg1:
jmeharg1@debian:~/jmeharg1-pa5/driver$ 
```

```
jmeharg1@debian:~/jmeharg1-pa5/src$ ./producer p 2
Device (/dev/scull) opened
write: Philippe is a circular buffer
write: Philippe is a circular buffer
Device (/dev/scull) closed
jmeharg1@debian:~/jmeharg1-pa5/src$ ./consumer p 2
Device (/dev/scull) opened
read: Phi
read: Phi
Device (/dev/scull) closed
jmeharg1@debian:~/jmeharg1-pa5/src$ id
uid=1000(jmeharg1) gid=1000(jmeharg1) groups=1000(jmeharg1),27(
sudo),999(vboxsf)
jmeharg1@debian:~/jmeharg1-pa5/src$
```

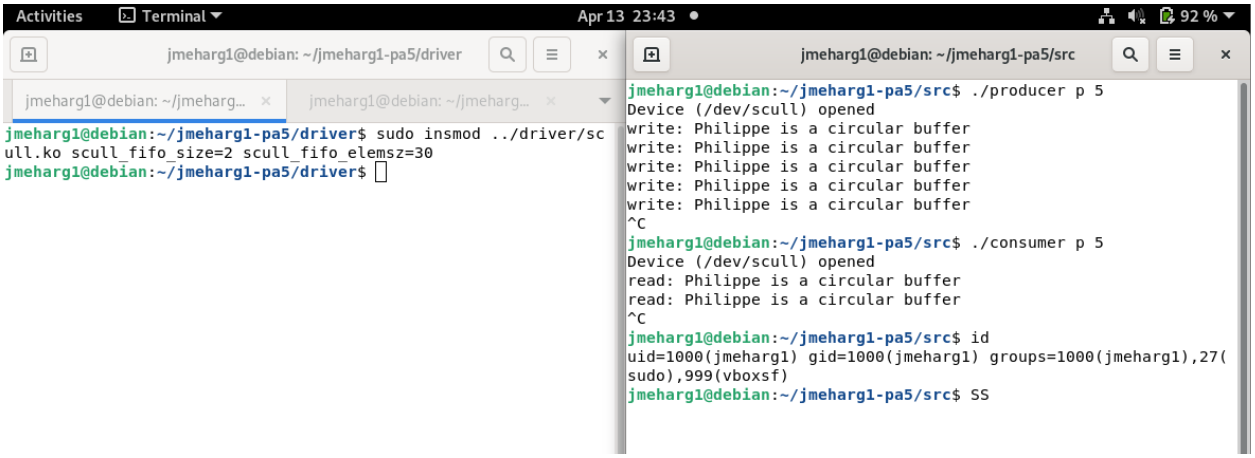
5.1 Screenshot showing that a message longer than the elemsz field will only copy elemsz amount of chars from the user buffer


Activities
Terminal
Apr 13 23:44
92 %
jmeharg1@debian: ~/jmeharg1-pa5/driver
jmeharg1@debian: ~/jmeharg...
jmeharg1@debian: ~/jmeharg...
jmeharg1@debian: ~/jmeharg1-pa5/src

```
jmeharg1@debian:~/jmeharg1-pa5/driver$ sudo insmod ../driver/sc
ull.ko scull_fifo_size=10 scull_fifo_elemsz=30
jmeharg1@debian:~/jmeharg1-pa5/driver$ 
```

```
jmeharg1@debian:~/jmeharg1-pa5/src$ ./producer p 2
Device (/dev/scull) opened
write: Philippe is a circular buffer
write: Philippe is a circular buffer
Device (/dev/scull) closed
jmeharg1@debian:~/jmeharg1-pa5/src$ ./consumer p 2
Device (/dev/scull) opened
read: Philippe is a circular buffer
read: Philippe is a circular buffer
Device (/dev/scull) closed
jmeharg1@debian:~/jmeharg1-pa5/src$ id
uid=1000(jmeharg1) gid=1000(jmeharg1) groups=1000(jmeharg1),27(
sudo),999(vboxsf)
jmeharg1@debian:~/jmeharg1-pa5/src$
```

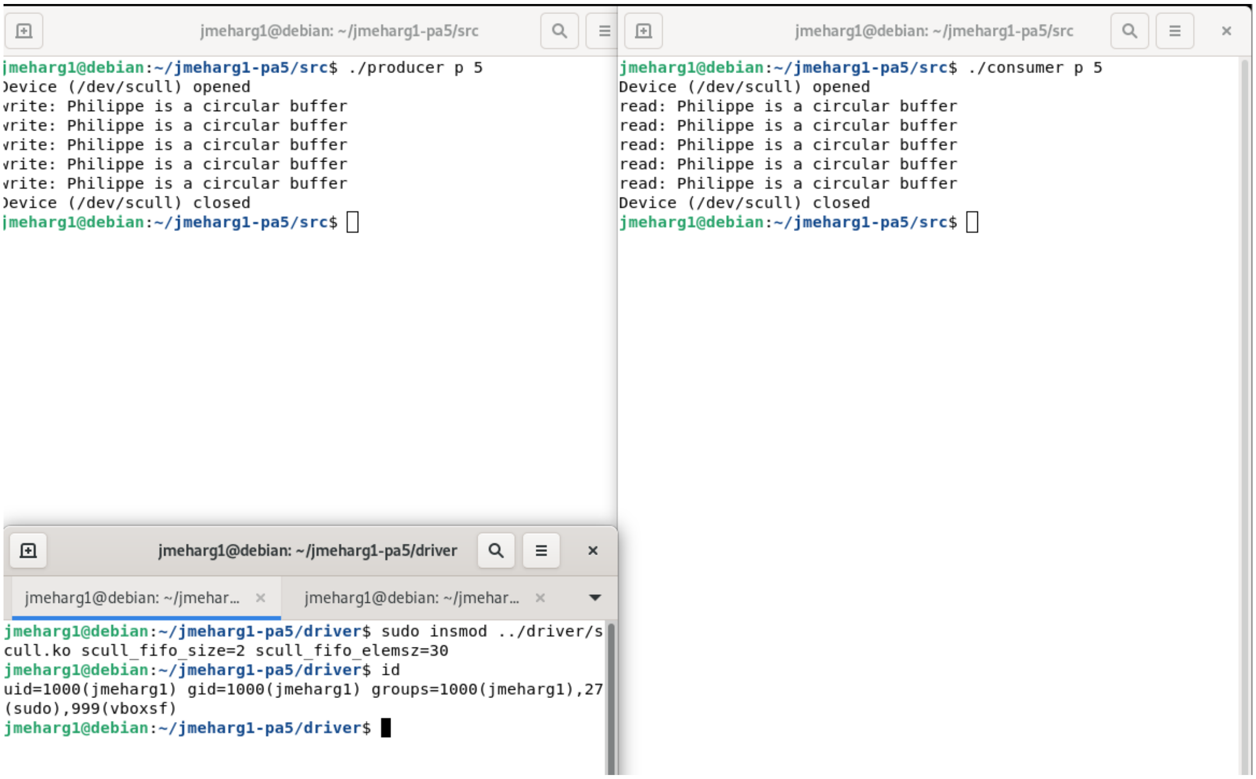
5.2 Screenshot showing that the basic producer and consumer actions work properly


Activities
Terminal
Apr 13 23:43
92 %
jmeharg1@debian: ~/jmeharg1-pa5/driver
jmeharg1@debian: ~/jmeharg...
jmeharg1@debian: ~/jmeharg...
jmeharg1@debian: ~/jmeharg1-pa5/src

```
jmeharg1@debian:~/jmeharg1-pa5/driver$ sudo insmod ../driver/sc
ull.ko scull_fifo_size=2 scull_fifo_elemsz=30
jmeharg1@debian:~/jmeharg1-pa5/driver$ 
```

```
jmeharg1@debian:~/jmeharg1-pa5/src$ ./producer p 5
Device (/dev/scull) opened
write: Philippe is a circular buffer
write: Philippe is a circular buffer
write: Philippe is a circular buffer
write: Philippe is a circular buffer
write: Philippe is a circular buffer
^C
jmeharg1@debian:~/jmeharg1-pa5/src$ ./consumer p 5
Device (/dev/scull) opened
read: Philippe is a circular buffer
read: Philippe is a circular buffer
^C
jmeharg1@debian:~/jmeharg1-pa5/src$ id
uid=1000(jmeharg1) gid=1000(jmeharg1) groups=1000(jmeharg1),27(
sudo),999(vboxsf)
jmeharg1@debian:~/jmeharg1-pa5/src$ SS
```

5.3 Screenshot showing concurrency is implemented properly by displaying how the producer is blocked from producing 5 messages as the message amount is capped at 2 and how the consumer is also blocked as there are not 5 messages to read in the buffer


jmeharg1@debian: ~/jmeharg1-pa5/src
jmeharg1@debian: ~/jmeharg1-pa5/src
jmeharg1@debian: ~/jmeharg1-pa5/driver
jmeharg1@debian: ~/jmehar...
jmeharg1@debian: ~/jmehar...

```
jmeharg1@debian:~/jmeharg1-pa5/src$ ./producer p 5
)evice (/dev/scull) opened
vrite: Philippe is a circular buffer
vrite: Philippe is a circular buffer
vrite: Philippe is a circular buffer
vrite: Philippe is a circular buffer
vrite: Philippe is a circular buffer
)evice (/dev/scull) closed
jmeharg1@debian:~/jmeharg1-pa5/src$ 
```

```
jmeharg1@debian:~/jmeharg1-pa5/src$ ./consumer p 5
Device (/dev/scull) opened
read: Philippe is a circular buffer
read: Philippe is a circular buffer
read: Philippe is a circular buffer
read: Philippe is a circular buffer
read: Philippe is a circular buffer
Device (/dev/scull) closed
jmeharg1@debian:~/jmeharg1-pa5/src$ 
```

```
jmeharg1@debian:~/jmeharg1-pa5/driver$ sudo insmod ../driver/s
cull.ko scull_fifo_size=2 scull_fifo_elemsz=30
jmeharg1@debian:~/jmeharg1-pa5/driver$ id
uid=1000(jmeharg1) gid=1000(jmeharg1) groups=1000(jmeharg1),27
(sudo),999(vboxsf)
jmeharg1@debian:~/jmeharg1-pa5/driver$ 
```

5.4 Screenshot showing how concurrency is implemented properly when two terminals have producers and consumers that are trying to write and read more than the limit but terminate properly as the two programs are allowed to run synchronously.