```
pi@raspberrypi:~/assignments/ass6.l/src $ ./count
1
2
3
4
5
6
7
8
9
10
11
12
13
14
```

Figure 1: Function of count program

Figure 2: Count output piped to the multiplier

Part 2 Information is passed between the programs by the shared accessible variable shm_p, it is stored as a file in /dev/shm/demo/shm.

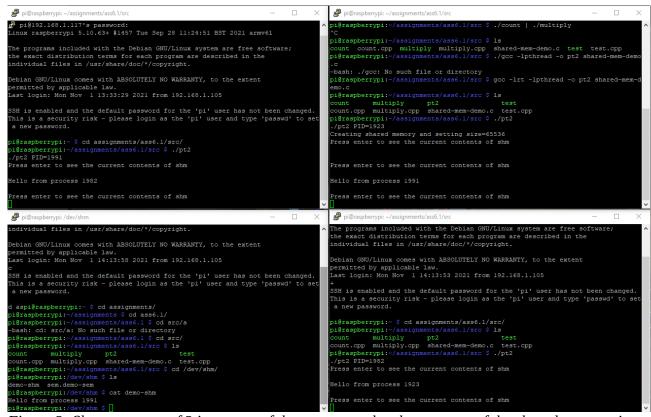


Figure 3: Shows content of 3 instances of the program, also the contents of the shared memory in bottom left

Part 3

I reduced the size of the shared memory to 256, since I was storing 8 bit integers as the shared variable

```
pi@raspberrypi:~/assignments/ass6.1/src $ ./sh_mult 2 & ./sh_mult 3 & ./sh_count
[1] 5587
[2] 5588
./sh count PID=5589
Creating shared memory and setting size=256
./sh mult PID=5587
./sh_mult PID=5588
3
2
4
6
3
4
12
8
5
10
6
18
21
14
24
16
^C
pi@raspberrypi:~/assignments/ass6.1/src $ p
-bash: p: command not found
spi@raspberrypi:~/assignments/ass6.1/src $ ps
PID TTY TIME CMD
5193 pts/5 00:00:01 bash
5587 pts/5 00:00:00 sh_mult
5588 pts/5 00:00:00 sh_mult
5599 pts/5 00:00:00 ps
pi@raspberrypi:~/assignments/ass6.1/src $ kill 5587
[1]- Terminated
                     ./sh_mult 2
pi@raspberrypi:~/assignments/ass6.1/src $ kill 5588
[2]+ Terminated
                      ./sh_mult 3
pi@raspberrypi:~/assignments/ass6.1/src $
```

Figure 4: One program incrementing counter and 2 other multiplying by 2 or 3 Note in figure 3, that the order of the multipliers 2 and 3 isn't deterministic and changes randomly although I didn't think this was something that needed correcting so I left it as is.