Corey Kipp (Student ID: 57723335)

kippc@uci.edu
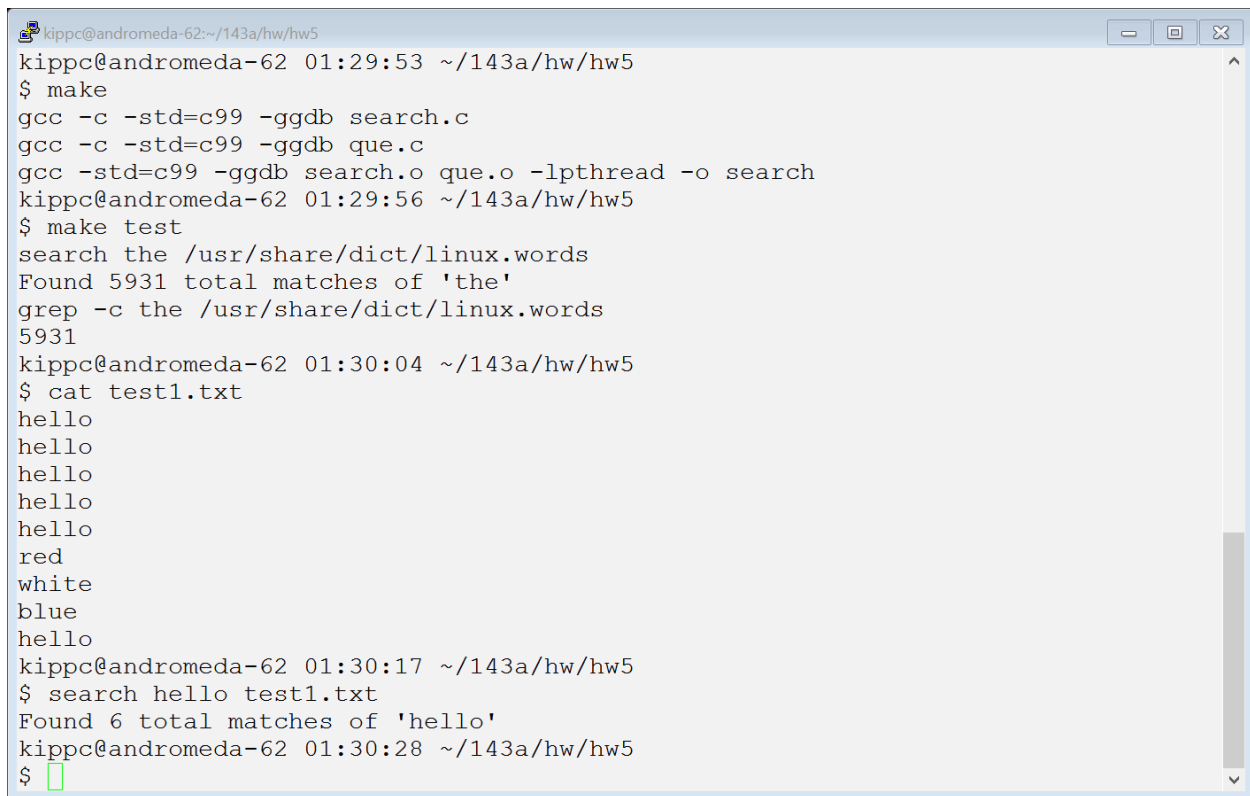
CS 143A

Homework 5

Part 1

Shortest Job First (SJF) (Non-preemptive), Shortest Remaining Time First (SRTF) (Preemptive), and Priority are all scheduling algorithms that could lead to starvation. Starvation is most likely to occur in SJF and SRTF when jobs are long, and Priority may starve low priority jobs that end up waiting indefinitely.

Part 2

```
kippc@andromeda-62:~/143a/hw/hw5                                    _  □  ✕
kippc@andromeda-62 01:29:53 ~/143a/hw/hw5
$ make
gcc -c -std=c99 -ggdb search.c
gcc -c -std=c99 -ggdb que.c
gcc -std=c99 -ggdb search.o que.o -lpthread -o search
kippc@andromeda-62 01:29:56 ~/143a/hw/hw5
$ make test
search the /usr/share/dict/linux.words
Found 5931 total matches of 'the'
grep -c the /usr/share/dict/linux.words
5931
kippc@andromeda-62 01:30:04 ~/143a/hw/hw5
$ cat test1.txt
hello
hello
hello
hello
hello
red
white
blue
hello
kippc@andromeda-62 01:30:17 ~/143a/hw/hw5
$ search hello test1.txt
Found 6 total matches of 'hello'
kippc@andromeda-62 01:30:28 ~/143a/hw/hw5
$
```

Part 3

First-Come First-Served

P1 — 60
P2 — 100
P3 — 125
P4 — 175

Shortest Job First

P1 — 60
P2 — 125
P3 — 85
P4 — 175

Shortest Remaining Time First

P1 — 15
P2 — 25
P3 — 50
P2 — 80
P1 — 125
P4 — 175

Round Robin

P1 — 20   50   90   125   155
P4 — 30   60   100   135
P3 — 40   70   105
P4 — 80   115   145

Priority

P1 — 60
P2 — 125
P3 — 85
P4 — 175

Average Turnaround Time, Average Response Time

91.25, 47.5

87.5, 43.75

83.75,17.5

118.75,2.5

87.5,43.75