

Problem 4 Sample Runs

I. Individual Program Testing

a. wordgen wc

```
a@a:~/Downloads$ ./wordgen 1000 | wc
Finished generating 1000 candidate words
    1000    1000    9858
a@a:~/Downloads$
```

Figure 1: Testing wordgen output

b. wordgen time

```
a@a:~/Downloads$ time ./wordgen 1000000 >/dev/null
Finished generating 1000000 candidate words

real    0m0.181s
user    0m0.173s
sys     0m0.008s
a@a:~/Downloads$
```

Figure 2: Timing wordgen

c. wordsearch "COMPUTER"

```
a@a:~/Downloads$ echo "COMPUTER" | ./wordsearch words.txt
Accepted 450037 words
COMPUTER
Matched 1 words
a@a:~/Downloads$
```

Figure 3: Testing wordsearch output¹

d. wordsearch time

```
a@a:~/Downloads$ time ./wordgen 10000 | ./wordsearch words.txt >/dev/null
Accepted 450037 words
Finished generating 10000 candidate words
Matched 210 words

real    0m22.305s
user    0m22.275s
sys     0m0.023s
a@a:~/Downloads$
```

Figure 4: Timing wordsearch¹

¹ Note: The number of accepted words is less than the number of words in words.txt, because wordsearch.c rejects all words whose length exceeds 15 characters.

I. Individual Program Testing (cont.)

e. pager (+ echo \$?)

```
a@a:~/Downloads$ ./pager pager.c
#include <stdio.h>
#include <ctype.h>
#include <string.h>
```

```

j
---Press RETURN for more---
q
*** Pager terminated by Q command ***

a@a:~/Downloads$ echo $?
0
a@a:~/Downloads$ █
```

Figure 5: Testing pager²

f. wordgen + wordsearch + pager (pipe'd via command line)

```
a@a:~/Downloads$ ./wordgen | ./wordsearch words.txt | ./pager
Accepted 450037 words
TGN
REED
FOG
```

```
JAK
GOR
---Press RETURN for more---
q
*** Pager terminated by Q command ***

PID 5229 received signal 13.
Matched 2005 words
a@a:~/Downloads$ █
```

Figure 6: Testing wordgen + wordsearch + pager^{2,3}

² Note: Excess output was excluded.

³ Note: The number of accepted words is less than the number of words in words.txt, because wordsearch.c rejects all words whose length exceeds 15 characters.

II. Launcher Testing

```
derek@derek-VirtualBox:~/OS/PSET #4$ ./launcher
Accepted 450037 words
```

Figure 7: Running launcher⁴

```
VRS
KEL
BSL
ATR
HMS
MTC
ELC
LTC
VAU
NDL
WDT
XIM
USES
TAS
---Press RETURN for more---
q
*** Pager terminated by Q command ***

Child process (2813) exited with status: 0
PID 2812 received signal 13.
Matched 1993 words
Child process (2812) exited with status: 0
Child process (2811) terminated due to unhandled signal: 13
derek@derek-VirtualBox:~/OS/PSET #4$
```

Figure 8: Launcher output⁵

⁴ Note: The number of accepted words is less than the number of words in words.txt, because wordsearch.c rejects all words whose length exceeds 15 characters.

⁵ Note: Excess output was excluded.