

Github repo can be found here: <https://github.com/MikeyRooney/MA5621>

Building and running

To build just type make in each task's directory.

Each program accepts input as specified in the assignment. Note that task 3 and 4 do not support reading from a file. Each program also has some basic checking of args. An error will be printed if required arguments are missing.

Tests

Tests were created for each task. Tests can be run by typing "make test" in the task's directory. Tests are done using shell scripts. The program is called with specified input, and the output is checked against an expected string.

I had some issues with newlines when checking output. To deal with this I use the tr command to replace newlines with spaces. This means that checking the expected value is not very elegant, but it works. If I reuse these shells scripts for more tests later I will try to handle newlines in a better way.

Task 1:

```
m@ubuntu: ~/Desktop/MA5621/Assignment 5/Task 1
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 1$ ./round 1234
1234 = 1.2K
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 1$ ./round -h 123400
123400 = 120.5K
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 1$ ./round -M 123400
123400 = 0.1M
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 1$
```

Task 2:

```
m@ubuntu: ~/Desktop/MA5621/Assignment 5/Task 2
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 2$ ./my_seq 5
1
2
3
4
5 input, and the output
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 2$ ./my_seq 2 5
2 I use the tr
3 the expected value is
4 its later I will try to
5
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 2$ ./my_seq 1 2 5
1
3
5
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 2$ ./my_seq 0 10 100 -w
000
010
020
030
040
050
060
070
080
090
100
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 2$
```

Task 3:

```
m@ubuntu: ~/Desktop/MA5621/Assignment 5/Task 3
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 3$ cat test.txt | ./my_grep KEYWORD
aaaKEYWORDbbbbaaKEYWORDcc
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 3$ cat test.txt | ./my_grep KEYWORD -n
1:aaaKEYWORDbbbbaaKEYWORDcc
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 3$ cat test.txt | ./my_grep KEYWORD -n -c
1:aaaKEYWORDbbbbaaKEYWORDcc
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 3$ cat test.txt | ./my_grep KEYWORD -n -c -v
2:ccdddeeefff
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 3$
```

Task 4:

```
m@ubuntu: ~/Desktop/MA5621/Assignment 5/Task 4
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 4$ cat test.txt | ./my_hexdump
00000000  65 66 61 65 66 0a 65 66  09 71 66 65 71 65 66 71  |efaef.ef.qfeqefq|
00000010  0a 09 71 65 66 65 66 71  66 0a 66 61 0a          |..qefefqf.fa....|
0000001d
m@ubuntu:~/Desktop/MA5621/Assignment 5/Task 4$
```