Source File: ~/1337/46/lab46.(C|CPP|cpp|c++|cc|cxx|cp)
Input: Standard Input
Output: Standard Output
Value: 1

Write a program that reads from standard input character-by-character and prints each input line preceded with a line number. The line number should be written in a field of width four (4) and should be followed by a colon and two spaces. The input is of unknown length; however, input can terminate when the end-of-data marker is encountered.

A sample execution sequence is shown in Figure 1. To use the `Makefile` as distributed in class, add a target of `lab46` to `targets1srcfile`.

```
 1   newuser@csunix ~> cd 1337
 2   newuser@csunix ~/1337> mkdir 46
 3   newuser@csunix ~/1337> cd 46
 4   newuser@csunix ~/1337/46> cp /usr/local/1337/data/46/* .
 5   newuser@csunix ~/1337/46> cp /usr/local/1337/src/Makefile .
 6   newuser@csunix ~/1337/46> touch lab46.cpp
 7   newuser@csunix ~/1337/46> # Edit Makefile and lab46.cpp
 8   newuser@csunix ~/1337/46> make lab46
 9   g++ -g -Wall -std=c++11 -c lab46.cpp -I/usr/local/1337/include -I.
10   g++ -o lab46 lab46.o -L/usr/local/1337/lib -lm -lbits
11   newuser@csunix ~/1337/46> cat 01.dat
12   1992 1993 1994
13   This is a test of your  word   analysis program.
14   How many words did you find that begin with  a vowel?
15   WHAT ABOUT STARTING WITH AN S OR ENDING IN AN s?
16   Mary said, "I like C++."
17   newuser@csunix ~/1337/46> cat 01.dat | ./lab46
18   Your Name - CS 1337 - Lab 46
19
20      1:  1992 1993 1994
21      2:  This is a test of your  word   analysis program.
22      3:  How many words did you find that begin with  a vowel?
23      4:  WHAT ABOUT STARTING WITH AN S OR ENDING IN AN s?
24      5:  Mary said, "I like C++."
25   newuser@csunix ~/1337/46> cat 01.dat | ./lab46 > my.out
26   newuser@csunix ~/1337/46> diff 01.out my.out
27   newuser@csunix ~/1337/46> cat 02.dat | ./lab46 > my.out
28   newuser@csunix ~/1337/46> diff 02.out my.out
29   newuser@csunix ~/1337/46> cat 03.dat | ./lab46 > my.out
30   newuser@csunix ~/1337/46> diff 03.out my.out
31   newuser@csunix ~/1337/46> cat 04.dat | ./lab46 > my.out
32   newuser@csunix ~/1337/46> diff 04.out my.out
33   newuser@csunix ~/1337/46> cat 06.dat | ./lab46 > my.out
34   newuser@csunix ~/1337/46> diff 06.out my.out
35   newuser@csunix ~/1337/46>
```

Figure 1. Commands to Compile, Link, & Run Lab 46