```
1: // $Id: scanf.c,v 1.1 2012-02-09 18:53:09-08 - - $
 3: // Demo usage of scanf(3c).
 4: // Read in numbers and print them out one per line.
 6: #include <assert.h>
 7: #include <libgen.h>
 8: #include <stdio.h>
 9: #include <stdlib.h>
10:
11: int main (int argc, char **argv) {
12:
      char *progname = basename (argv[0]);
13:
      char err_buffer [256];
14:
      char err_buf_fmt[16];
15:
      sprintf (err_buf_fmt, "%%%lds", sizeof err_buffer - 1);
      printf ("err_buf_fmt = \"%s\"\n", err_buf_fmt);
16:
17:
18:
     for (;;) {
19:
         // Try to read a double number. Print an error message if a
20:
21:
         // word is not recognized as a number. Stop at end of file.
22:
23:
         double number;
24:
         int scancount = scanf ("%lg", &number);
25:
26:
         if (scancount == EOF) {
27:
            printf ("%s: EOF\n", progname);
28:
            break;
29:
         }else if (scancount == 1) {
30:
            printf ("%s: number = %.15g\n", progname, number);
31:
         }else {
            scancount = scanf (err_buf_fmt, err_buffer);
32:
33:
            assert (scancount == 1);
34:
            printf ("%s: bad number \"%s\"\n", progname, err_buffer);
35:
         };
      };
36:
37:
38:
      return EXIT_SUCCESS;
39: }
40:
41: /*
42: //TEST// (echo 33 44 \
43: //TEST// ;echo 1e1000000 \
45: //TEST// ;echo This-is-not a-number \
47: //TEST// ;echo -6.02e23 +Infinity -Infinity NaN \setminus
48: //TEST// ) | runprog -x scanf.lis -0- ./scanf
49: //TEST// mkpspdf scanf.ps scanf.c* scanf.lis*
50: */
51:
```

```
1:
3: log: scanf.log
6:
      1 Script : /afs/cats.ucsc.edu/courses/cmps012b-wm/bin/runprog
7:
      2 limit c : 0 max core file size (KB)
      3 limit f : 4194303 max output file size (KB)
8:
      4 limit t : 4294967295 max CPU time (sec)
9:
10:
      5 stdin
      6 stdout : scanf.out
11:
12:
      7 stderr : scanf.err
13:
     8 log
           : scanf.log
14:
     9 listing : scanf.lis
15:
     10 Command : ./scanf
16:
     11 starting: pid 14519: 18:53:09.00
     12 finished: pid 14519: 18:53:09.00, real 0.00, user 0.00, sys 0.00
17:
18:
     13 pstatus: 0x0000 EXIT STATUS = 0
19:
21: stdout: scanf.out
23:
24:
      1 err_buf_fmt = "%255s"
      2 scanf: number = 33
25:
26:
      3 scanf: number = 44
27:
      4 scanf: number = inf
28:
      5 scanf: number = 8.8888888888889e+53
     6 scanf: bad number "This-is-not"
29:
30:
     7 scanf: bad number "a-number"
     8 scanf: number = 0.66666666666667
31:
     9 scanf: number = -6.02e+23
32:
     10 scanf: number = inf
33:
34:
     11 scanf: number = -inf
35:
     12 scanf: number = nan
36:
     13 scanf: EOF
37:
39: stderr: scanf.err
41:
```