```
1: // $Id: scanf.c,v 1.3 2016-01-28 16:02:07-08 - - $
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:
      (void) argc; // : unused parameter 'argc'
13:
      char *progname = basename (argv[0]);
14:
      char err_buffer [256];
15:
      char err_buf_fmt[16];
16:
      sprintf (err_buf_fmt, "%%%lds", sizeof err_buffer - 1);
17:
      printf ("err_buf_fmt = \"%s\"\n", err_buf_fmt);
18:
19:
      for (;;) {
20:
21:
         // Try to read a double number. Print an error message if a
22:
         // word is not recognized as a number. Stop at end of file.
23:
24:
         double number;
25:
         int scancount = scanf ("%lg", &number);
26:
27:
         if (scancount == EOF) {
28:
            printf ("%s: EOF\n", progname);
29:
            break;
30:
         }else if (scancount == 1) {
31:
            printf ("%s: number = %.15g\n", progname, number);
32:
         }else {
            scancount = scanf (err_buf_fmt, err_buffer);
33:
34:
            assert (scancount == 1);
            printf ("%s: bad number \"%s\"\n", progname, err_buffer);
35:
36:
         }
37:
      }
38:
39:
      return EXIT_SUCCESS;
40: }
41:
42: /*
43: //TEST// (echo 33 44 \
44: //TEST// ;echo 1e1000000 \
46: //TEST// ;echo This-is-not a-number \
48: //TEST// ;echo -6.02e23 +Infinity -Infinity NaN \
49: //TEST// ) | runprog -x scanf.lis -0- ./scanf
50: //TEST// mkpspdf scanf.ps scanf.c* scanf.lis*
51: */
52:
```

01/28/16 16:02:07

\$cmps012b-wm/Labs-cmps012m/lab6c-malloc-free/misc/scanf.c.log

1/1

```
1:
3: log: scanf.log
6:
        Script : /afs/cats.ucsc.edu/courses/cmps012b-wm/bin/runprog
7:
                 0 max core file size (KB)
      3 limit f: 4194303 max output file size (KB)
8:
9:
      4 limit t : 4294967295 max CPU time (sec)
      5 stdin
10:
             : -
11:
      6 stdout : scanf.out
12:
      7 stderr : scanf.err
13:
     8 log
            : scanf.log
     9 listing : scanf.lis
14:
15:
     10 Command: ./scanf
16:
     11 starting: pid 26924: 16:02:07.00
17:
     12 finished: pid 26924: 16:02:07.00, real 0.00, user 0.00, sys 0.00
18:
     13 pstatus: 0x0000 EXIT STATUS = 0
19:
21: stdout: scanf.out
23:
24:
      1 err_buf_fmt = "%255s"
25:
      2 scanf: number = 33
      3 scanf: number = 44
26:
27:
      4 scanf: number = inf
28:
      5 scanf: number = 8.8888888888889e+53
      6 scanf: bad number "This-is-not"
29:
      7 scanf: bad number "a-number"
30:
31:
      8 scanf: number = 0.66666666666667
32:
     9 scanf: number = -6.02e+23
33:
     10 scanf: number = inf
34:
     11 scanf: number = -inf
     12 scanf: number = nan
35:
     13 scanf: EOF
36:
37:
39: stderr: scanf.err
41:
```