```
 1: // $Id: scanfbug.c,v 1.9 2013-09-25 14:54:29-07 - - $
 2: //
 3: // NAME
 4: //     scanfbug - illustrate bug in scanf.
 5: //
 6: // DESCRIPTION
 7: //     Uses %lg to read and print numbers or errors out for non-numbers.
 8: //     But fails to recognize a lone + or - on input.
 9:
10:
11: #include <assert.h>
12: #include <stdio.h>
13: #include <stdlib.h>
14:
15: int main (void) {
16:    int exit_status = EXIT_SUCCESS;
17:    for (;;) {
18:       double number;
19:       int scanrc = scanf ("%lg", &number);
20:       if (scanrc == EOF) break;
21:       if (scanrc == 1) {
22:          printf ("number = %.15g\n", number);
23:       }else {
24:          exit_status = EXIT_FAILURE;
25:          char buffer[1024];
26:          scanrc = scanf ("%1023s", buffer);
27:          assert (scanrc == 1);
28:          printf ("bad input \"%s\"\n", buffer);
29:       }
30:    }
31:    return exit_status;
32: }
33:
34: /*
35: //TEST// (echo 34 92.6 123foob + - 38 - + +3 -33 infinity \
36: //TEST// +infinity -infinity nan - 43 end \
37: //TEST// | ./scanfbug; echo status = $?) >scanfbug.lis 2>&1
38: //TEST// mkpspdf scanfbug.ps scanfbug.c* scanfbug.lis
39: */
40:
```

```
1: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting scanfbug.c
2: scanfbug.c:
3:      $Id: scanfbug.c,v 1.9 2013-09-25 14:54:29-07 - - $
4: gcc -g -O0 -Wall -Wextra -rdynamic -std=gnu11 scanfbug.c
5:         -o scanfbug -lglut -lGLU -lGL -lX11 -lrt -lm
6: rm -f scanfbug.o
7: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished scanfbug.c
```

```
 1: + ./scanfbug
 2: + echo 34 92.6 123foob + - 38 - + +3 -33 infinity +infinity -infinity na
n - 43 end
 3: number = 34
 4: number = 92.6
 5: number = 123
 6: bad input "foob"
 7: bad input "-"
 8: number = 38
 9: bad input "+"
10: number = 3
11: number = -33
12: number = inf
13: number = inf
14: number = -inf
15: number = nan
16: bad input "43"
17: bad input "end"
18: + echo status = 1
19: status = 1
```