```
 1: // $Id: double.c,v 1.31 2016-01-13 22:04:46-08 - - $
 2:
 3: //
 4: // NAME
 5: //    double - print out information about double numbers
 6: //
 7:
 8: #include <libgen.h>
 9: #include <locale.h>
10: #include <stdio.h>
11: #include <values.h>
12:
13: int main (int argc, char **argv) {
14:    (void) argc; // avoid: warning: unused parameter 'argc'
15:    char *locale = setlocale (LC_NUMERIC, "en_US");
16:    if (locale == NULL) {
17:       fprintf (stderr, "%s: %s: %s\n", basename (argv[0]),
18:                "setlocale (LC_NUMERIC, \"en_US\")", "failed\n");
19:    }else {
20:       printf ("Locale set to %s\n", locale);
21:    }
22:    printf ("DBL_DIG = %d\n", DBL_DIG);
23:    printf ("DBL_EPSILON = %.15g\n", DBL_EPSILON);
24:    printf ("DBL_MANT_DIG = %d\n", DBL_MANT_DIG);
25:    printf ("DBL_MAX_10_EXP = %d\n", DBL_MAX_10_EXP);
26:    printf ("DBL_MAX = %.15g\n", DBL_MAX);
27:
28:    printf ("diameter of the universe = %g meters\n", 8.8e26);
29:
30:    double dollars = 1.00;
31:    while (dollars + 0.01 > dollars) dollars *= 2;
32:    printf ("dollars = $%'22.2f = $%g\n", dollars, dollars);
33:
34:    double us_debt = 18900819907288.77;
35:    printf ("US debt = $%'22.2f = $%g\n", us_debt, us_debt);
36:    printf ("          http://www.brillig.com/debt_clock/\n");
37:    printf ("          14 Jan 2016 at 05:53:18 AM GMT)\n");
38:    return 0;
39: }
40:
41: //TEST// ./double >double.lis 2>&1
42: //TEST// mkpspdf double.ps double.c* double.lis*
43:
```

```
1: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting double.c
2: double.c:
3:      $Id: double.c,v 1.31 2016-01-13 22:04:46-08 - - $
4: gcc -g -O0 -Wall -Wextra -rdynamic -std=gnu11 double.c
5:          -o double -lglut -lGLU -lGL -lX11 -lrt -lm
6: rm -f double.o
7: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished double.c
```

```
 1: Locale set to en_US
 2: DBL_DIG = 15
 3: DBL_EPSILON = 2.22044604925031e-16
 4: DBL_MANT_DIG = 53
 5: DBL_MAX_10_EXP = 308
 6: DBL_MAX = 1.79769313486232e+308
 7: diameter of the universe = 8.8e+26 meters
 8: dollars = $140,737,488,355,328.00 = $1.40737e+14
 9: US debt = $ 18,900,819,907,288.77 = $1.89008e+13
10:           http://www.brillig.com/debt_clock/
11:           14 Jan 2016 at 05:53:18 AM GMT)
```