```
 1: // $Id: mkstampfiles.c,v 1.12 2013-05-17 17:53:22-07 - - $
 2:
 3: //
 4: // Open several files and write into them.  Then use utime(2)
 5: // to force a time stamp onto them.
 6:
 7: #include <errno.h>
 8: #include <libgen.h>
 9: #include <stdio.h>
10: #include <stdlib.h>
11: #include <string.h>
12: #include <sys/types.h>
13: #include <time.h>
14: #include <utime.h>
15:
16: char *execname = NULL;
17: int exit_status = EXIT_SUCCESS;
18:
19: void maketimefile (time_t when) {
20:    char filename[64];
21:    sprintf (filename, "timestamp.%016lX", when);
22:    FILE *file = fopen (filename, "w");
23:    if (file == NULL) {
24:       fprintf (stderr, "%s: %s: %s\n",
25:                execname, filename, strerror (errno));
26:       exit_status = EXIT_FAILURE;
27:       return;
28:    }
29:    printf ("fopen (%s): OK\n", filename);
30:    char buffer[64];
31:    strftime (buffer, sizeof buffer, "%c %Z", localtime (&when));
32:    fprintf (file, "%s\n", buffer);
33:    strftime (buffer, sizeof buffer, "%c %Z", gmtime (&when));
34:    fprintf (file, "%s\n", buffer);
35:    fclose (file);
36:    struct utimbuf utimbuf;
37:    utimbuf.actime = when;
38:    utimbuf.modtime = when;
39:    utime (filename, &utimbuf);
40: }
41:
42: int main (int argc, char **argv) {
43:    (void) argc; // warning: unused parameter 'argc'
44:    execname = basename (argv[0]);
45:    time_t now = time (NULL);
46:    const time_t DAYS = 24 * 60 * 60;
47:    maketimefile (-0x80000000L);
48:    maketimefile (0);
49:    maketimefile (now - 200 * DAYS);
50:    maketimefile (now);
51:    maketimefile (now + 200 * DAYS);
52:    maketimefile (0x7FFFFFFF);
53:    maketimefile (0xFFFFFFFFL);
54:    maketimefile (0xFFFFFFFFFFFL);
55:    return exit_status;
56: }
57:
58: //TEST// rm ./timestamp.* >mkstampfiles.lis 2>&1
```

```
59: //TEST// ./mkstampfiles >>mkstampfiles.lis 2>&1
60: //TEST// ls -goatr timestamp.* >>mkstampfiles.lis 2>&1
61: //TEST// grep . timestamp.* >>mkstampfiles.lis 2>&1
62: //TEST// l8stat.perl *.perl *.c timestamp.* >>mkstampfiles.lis 2>&1
63: //TEST// mkpspdf mkstampfiles.ps mkstampfiles.c* *.perl mkstampfiles.lis
64:
```

```
1: * @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting mkstampfiles.c
2: * mkstampfiles.c: $Id: mkstampfiles.c,v 1.12 2013-05-17 17:53:22-07 -
3: - $
4: * gcc -g -O0 -Wall -Wextra -std=gnu99 mkstampfiles.c -o mkstampfiles
5: -lm
6: * rm -f mkstampfiles.o
7: * @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished mkstampfiles.c
```

```perl
 1: #!/usr/bin/perl
 2: # $Id: l8stat.perl,v 1.1 2012-02-29 19:04:02-08 - - $
 3: use POSIX qw(strftime);
 4: $0 =~ s|.*/||;
 5: $days180 = 180 * 24 * 3600;
 6: for $file (@ARGV ? @ARGV : ".") {
 7:    ($_, $_, $mode, $_, $_, $_, $_, $size, $_, $mtime, $_, $_, $_)
 8:          = lstat $file;
 9:    print STDERR "$0: $file: $!\n" and next unless defined $size;
10:    $fmt = $mtime < $^T - $days180 || $^T + $days180 < $mtime
11:        ? "%b %e  %Y" : "%b %e %R";
12:    printf "%06o %9d %s %s%s\n",
13:            $mode, $size, (strftime $fmt, localtime $mtime), $file,
14:            defined ($link = readlink $file) ? " -> $link" : "";
15: }
```

```
 1: fopen (timestamp.FFFFFFFF80000000): OK
 2: fopen (timestamp.0000000000000000): OK
 3: fopen (timestamp.000000005159D5C9): OK
 4: fopen (timestamp.00000000526181C9): OK
 5: fopen (timestamp.0000000053692DC9): OK
 6: fopen (timestamp.000000007FFFFFFF): OK
 7: fopen (timestamp.00000000FFFFFFFF): OK
 8: fopen (timestamp.000000FFFFFFFFFF): OK
 9: -rw-------. 1 58 Dec 13  1901 timestamp.FFFFFFFF80000000
10: -rw-------. 1 60 Dec 31  1969 timestamp.000000FFFFFFFFFF
11: -rw-------. 1 58 Dec 31  1969 timestamp.00000000FFFFFFFF
12: -rw-------. 1 58 Dec 31  1969 timestamp.0000000000000000
13: -rw-------. 1 58 Apr  1  2013 timestamp.000000005159D5C9
14: -rw-------. 1 58 Oct 18 11:45 timestamp.00000000526181C9
15: -rw-------. 1 58 May  6  2014 timestamp.0000000053692DC9
16: -rw-------. 1 58 Jan 18  2038 timestamp.000000007FFFFFFF
17: timestamp.0000000000000000:Wed Dec 31 16:00:00 1969 PST
18: timestamp.0000000000000000:Thu Jan  1 00:00:00 1970 GMT
19: timestamp.000000005159D5C9:Mon Apr  1 11:45:29 2013 PDT
20: timestamp.000000005159D5C9:Mon Apr  1 18:45:29 2013 GMT
21: timestamp.00000000526181C9:Fri Oct 18 11:45:29 2013 PDT
22: timestamp.00000000526181C9:Fri Oct 18 18:45:29 2013 GMT
23: timestamp.0000000053692DC9:Tue May  6 11:45:29 2014 PDT
24: timestamp.0000000053692DC9:Tue May  6 18:45:29 2014 GMT
25: timestamp.000000007FFFFFFF:Mon Jan 18 19:14:07 2038 PST
26: timestamp.000000007FFFFFFF:Tue Jan 19 03:14:07 2038 GMT
27: timestamp.00000000FFFFFFFF:Sat Feb  6 22:28:15 2106 PST
28: timestamp.00000000FFFFFFFF:Sun Feb  7 06:28:15 2106 GMT
29: timestamp.000000FFFFFFFFFF:Sun Feb 19 16:36:15 36812 PST
30: timestamp.000000FFFFFFFFFF:Mon Feb 20 00:36:15 36812 GMT
31: timestamp.FFFFFFFF80000000:Fri Dec 13 12:45:52 1901 PST
32: timestamp.FFFFFFFF80000000:Fri Dec 13 20:45:52 1901 GMT
33: 100700       586 May 14 21:31 l8stat.perl
34: 100600      1102 Oct 18 11:45 futuretimes.c
35: 100600      1882 Oct 18 11:45 mkstampfiles.c
36: 100600      1601 May 17 17:56 showlink.c
37: 100600        58 Dec 31  1969 timestamp.0000000000000000
38: 100600        58 Apr  1  2013 timestamp.000000005159D5C9
39: 100600        58 Oct 18 11:45 timestamp.00000000526181C9
40: 100600        58 May  6  2014 timestamp.0000000053692DC9
41: 100600        58 Jan 18  2038 timestamp.000000007FFFFFFF
42: 100600        58 Dec 31  1969 timestamp.00000000FFFFFFFF
43: 100600        60 Dec 31  1969 timestamp.000000FFFFFFFFFF
44: 100600        58 Dec 13  1901 timestamp.FFFFFFFF80000000
```