```
1: #!/usr/bin/perl
 2: # $Id: mtime.perl, v 1.1 2018-11-06 18:50:44-08 - - $
 3: #
 4: # NAME
 5: #
         older.perl - check whether a pair of files are older or newer
 6: #
7: # SYNOPSIS
 8: #
         older.perl filename...
9: #
10: # DESCRIPTION
11: #
         The two files' modification times are compared and a
12: #
         relationship is printed.
13: #
14:
15: use strict;
16: use warnings;
17: use POSIX qw(strftime);
18: 0 = |s|.*/|;
19:
20: sub mtime ($) {
21:
       my (filename) = 0;
22:
       my @stat = stat $filename;
23:
       return @stat ? $stat[9] : undef;
24: }
25:
26: sub fileinfo ($) {
       my ($filename) = @_;
27:
      my $mtime = mtime $filename;
28:
29:
      print "$filename: ";
30:
      if (defined $mtime) {print strftime "%c\n", localtime $mtime}
31:
                      else {print "$!\n"}
32:
       return $mtime;
33: }
34:
35: for my $filename (@ARGV) {
36:
       unless (-e $filename) {
          printf STDERR "$0: $filename: $!\n";
37:
38:
       }else {
39:
          my $mtime = mtime $filename;
40:
          my $ctime = strftime "%c", localtime $mtime;
41:
          printf "%-20s %12d %s\n", $filename, $mtime, $ctime;
42:
43: }
44:
```

02/14/20 17:11:15

\$cse112-wm/Assignments/asg4-perl-pmake/code mtime.output

1/1

```
1: HEADER.html
                           1581560696 Wed 12 Feb 2020 06:24:56 PM PST
2: RCS
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
 3: graph.output
 4: graph.perl
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
 5: graph.perl.pdf
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
 6: graph.perl.ps
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
7: mk
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
 8: mtime.output
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
9: mtime.perl
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
10: mtime.perl.pdf
11: mtime.perl.ps
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
12: sigtoperl
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
13: sigtoperl.cpp
                           1581728938 Fri 14 Feb 2020 05:08:58 PM PST
                           1581728940 Fri 14 Feb 2020 05:09:00 PM PST
14: sigtoperl.cpp.pdf
15: sigtoperl.cpp.ps
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
16: sigtoperl.output
                           1581728939 Fri 14 Feb 2020 05:08:59 PM PST
17: utime-maxint.txt
                           2147483647 Mon 18 Jan 2038 07:14:07 PM PST
                                    0 Wed 31 Dec 1969 04:00:00 PM PST
18: utime-zero.txt
                           1581729075 Fri 14 Feb 2020 05:11:15 PM PST
19: .
20: /dev/null
                           1581355107 Mon 10 Feb 2020 09:18:27 AM PST
```

```
1: #!/bin/sh
2: # $Id: mk, v 1.14 2020-02-14 17:11:15-08 - - $
 4: cid + $0
5:
 6: cid + graph.perl
7: graph.perl >graph.output 2>&1
8:
9: cid + mtime.perl
10: cp /dev/null utime-zero.txt
11: perl -e 'utime 0, 0, "utime-zero.txt"'
12: cp /dev/null utime-maxint.txt
13: perl -e 'utime 0x7FFFFFFF, 0x7FFFFFFF, "utime-maxint.txt"'
14: mtime.perl * . /dev/null >mtime.output 2>&1
15:
16: cid + sigtoperl.cpp
17: mkc sigtoperl.cpp
18: sigtoperl >sigtoperl.output 2>&1
20: mkpspdf graph.perl.ps graph.perl graph.output
21: mkpspdf mtime.perl.ps mtime.perl mtime.output $0
22: mkpspdf sigtoperl.cpp.ps sigtoperl.cpp sigtoperl.output
23:
```