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#!/usr/bin/perl

# month offset tables for nomal year
@MM = (0, 1, 2, 3, 4, 5, 5, 5, 5, 5, 5, 5);

# usage
die "Usage: cal c/y/m/d" if ($ARGV[0] eq undef);

# get date form
($cc,$yy,$mm,$dd) = split('/', $ARGV[0]);

# date normalization
$c1 = $cc % 27;
$ct = ($cc-$c1) / 27;
$cm = $ct % 12;
$ch = ($ct-$cm) / 12;
$mm -= $cm;
($yy,$mm) = ($yy-1,$mm+12) if ($mm < 0);
($c1,$yy) = ($c1-1,63) if ($yy < 0);
($cm,$c1,$mm) = ($cm-1,26,$mm+1) if ($c1 < 0);
($ch,$cm) = ($ch-1,11) if ($cm < 0);
$y1 = $yy % 4;
$yh = ($yy-$y1) / 4;

# conversion to Julian Day Number
$jdn = $ch * (((365*4+1)*16*27-13)*12-5)
      + $cm * ((365*4+1)*16*27-13 +30)
      + $c1 * (365*4+1)*16 - int($c1/2)
      + $yy * 365 + $yh
      + $mm * 30 + $MM[$mm]
      + $dd + (2526409-2898564);

# adjustment of leap day
$jdn++ if ($y1 == 3 && $mm > 5 &&
          !($yh == 15 && ($c1 % 2 > 0)));

print "$ARGV[0]: $jdn";

```