

**NAME**

praytimer – produce daily, monthly, or yearly Islamic prayer hour schedules

**SYNOPSIS**

**praytimer** [-f *fiqh*] [-r *ratio*] [-a *angle*] [-t *time*]

**DESCRIPTION**

**praytimer** generates prayer time schedules for any location for any day, month or year. The yearly schedules can be “perpetual” or for any desired year. The program allows for *fiqhi* variations in computing methods.

**praytimer** prompts the user on the terminal (stderr) for location name, geographical data, and schedule dates; reads the data from standard input; and writes the schedule to standard output. Many schedules can be produced in one session.

The following command line options affect the method of computation.

- f *fiqh*      Fiqh should be S(hafi‘i) or H(anafi). Sets the shadow ratio for determining ‘Asr to 1 or 2, respectively. Default value is Shafi‘i.
- r *ratio*      Specifies the value of the ‘Asr shadow ratio explicitly. Default value is 1.
- a *angle*      Specifies Sun’s angle of depression at Fajr in degrees. Common values are 18 (for Fajr to be the same as the astronomical twilight) or 15 (a bit later). Default value is 15.
- t *time*      Specifies the time interval from Fajr to sunrise in minutes. A common value used is 90 minutes. This method is sometimes used in high-latitude locations where times for the usual values of Sun’s depression are either undefined or are impractical.

Note: ‘Isha is computed symmetrically with respect to Fajr, with whichever method is chosen and whatever parameter value is specified. It is an error to specify both -a and -t or both -f and -r at the same time.

**INPUT DATA**

Data on standard input must contain (in given order):

Name of location (upto 30 characters)

Latitude degrees and minutes, and N or S to specify north or south.

Longitude degrees and minutes, and E or W to specify east or west.

Time Zone in hours (Decimal for fractional hour zones, negative if West of Greenwich).

Y, M or D for whether yearly, monthly, or daily schedule is desired.

For yearly output:

Year in the range 1900..2200, or 0 for a perpetual schedule

For monthly output:

Year in the range 1900..2200, or 0 for a perpetual schedule

Month in the range 1..12

For daily output:

Year in the range 1900..2200

Month in the range 1..12

Day in the range 1..29 or 30 or 31 legal for the month

Data items should be separated by whitespace, but the name must be on a separate line by itself because it may contain spaces or punctuation.

Input may contain data for more than one location. To compute more schedules for the previous location, an asterisk (“\*”) can be input instead of typing the location name and geographical data again.

The zero value for year doesn’t mean that the year is zero BC or AD; it is a special value to cause **praytimer** to prepare a perpetual calendar in which the times are essentially the average for the

four years of a leap cycle. The yearly variation in prayer times is seldom more than two minutes, and the times return back to almost the same value every four years. It thus makes little sense to print a new timetable every year.

## EXAMPLES

The following command sequence on a Unix system produces a file *dc.out* containing a perpetual prayer schedule for Washington, DC, using the Sun's depression angle of 15 degrees to define Fajr and a shadow ratio of 1 to define 'Asr. (Since these are default values, they need not have been included.) The schedule includes adjustment for Daylight Saving Time.

```
cat > dc.dta
Washington, DC
38 54 N
77 1 W
-5 Y
Y 0
^D
praytimer -a 15 -r 1 < dc.dta > dc.out
```

## AUTHOR

Kamal Abdali has derived this code from his *Minaret* program.

## BUGS

Support for the Ja'fari fiqh should be added.