

**NAME**

`prayscheduler` – produce Islamic prayer time schedule in TeX input form

**SYNOPSIS**

`prayscheduler` [**-f** *fiqh*] [**-r** *ratio*] [**-a** *angle*] [**-t** *time*] [**-i**]

**DESCRIPTION**

**prayscheduler** generates pleasant looking prayer time schedules for any location. The schedules can be “perpetual” or for any desired year. The program allows for *fiqhi* variations in computing methods.

**prayscheduler** reads from standard input the geographical data about the locations, and writes to standard output the TeX code for the schedules.

**OPTIONS**

- 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.
- i**              Interactive input of geographical data. Instead of reading these from standard input, **prayscheduler** prompts the user at the terminal (stderr).

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.
- Timezone in hours (Decimal for fractional hour zones, negative if West of Greenwich).
- Y or 1 if Daylight Saving Time adjustment needed. N or 0, otherwise.
- Year in the range 1900-2200, or 0 for a perpetual schedule.

The zero value does not mean that the year is zero BC or AD; it is a special value to cause **prayscheduler** 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.

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; the tables will be concatenated on the output.

**EXAMPLES**

The following command sequence on a Unix system produces a file *dc.tex* containing the TeX input code for 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 1
0
```

<sup>^D</sup>  
`prayscheduler -a 15 -r 1 < dc.dta > dc.tex`

**AUTHOR**

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

**BUGS**

Support for the Ja'fari fiqh should be added.