

# The `schedule` package<sup>\*</sup>

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## Abstract

This package defines the `schedule` environment. This is primarily intended for constructing charts of recurring weekly appointments. It may also be used to create a schedule of events and sign-up sheets (for example, scheduling mandatory office visits with students for discussing paper topics, etc.)

This package requires the packages `calc` and `xcolor`.

## 1 Introduction

`schedule` provides a simple interface for creating graphical charts displaying weekly appointments. Many respects of the overall layout can be customized to suit the user's desires. Unless these default settings are changed, the created schedule will run from Monday to Friday, 8:00am to 5:00pm, and the only predefined command to insert appointments will be `\class`, which draws the appointment using black text on a medium-gray background.

The main feature of the `schedule` package is its accuracy in diagramming the length of appointments. Unlike some professionally available schedule creation programs, the representation of the length of appointments in the `schedule` package is accurate to the minute. In other words, if you have two appointments, one running from 2:00pm to 3:30pm on Tuesday and another running from 2:00pm to 3:31pm on Wednesday, there is a visible difference between the two representations. Unfortunately, unless you have a high-resolution printer (by which I mean more than 600 dpi) these differences will likely only be noticeable by a on-screen previewing program like `ghostview`.

## 2 Examples

The following schedule is typeset using the commands:

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<sup>\*</sup>This file has version number v1.10, last revised 2019/7/26.

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```

\CellHeight{.4in}
\CellWidth{1in}
\TimeRange{12:00-15:00}
\SubUnits{30}
\BeginOn{Monday}
\TextSize{\tiny}
\FiveDay

\NewAppointment{meeting}{red}{white}
\NewAppointment{workshop}{green}{blue}

\begin{schedule}[Fall Quarter, 1997]
\class{Moral Philosophy}{HOB2 233}{M}{14:00-16:50}
\class{Math Logic}{EIC 128}{T,Th}{11:00-12:20}
\class{Critical Reasoning}{SSL 290}{M,W,F}{13:00-13:50}
\meeting{Departmental Meeting}{HOB2 233}{W}{12:00-12:50}
\workshop{Crit. Reas. Workshop}{HOB2 233}{T}{13:00-13:50}
\class{Office Hours}{HOB2 210}{W,F}{14:00-14:50}
\end{schedule}

```

The result is:

|            | Monday                        | Tuesday                          | Wednesday                        | Thursday   | Friday                        |
|------------|-------------------------------|----------------------------------|----------------------------------|------------|-------------------------------|
| 12:00 noon |                               | Math Logic                       | Departmental Meeting<br>HOB2 233 | Math Logic |                               |
| 12:30 pm   |                               |                                  |                                  |            |                               |
| 1:00 pm    | Critical Reasoning<br>SSL 290 | Crit. Reas. Workshop<br>HOB2 233 | Critical Reasoning<br>SSL 290    |            | Critical Reasoning<br>SSL 290 |
| 1:30 pm    |                               |                                  |                                  |            |                               |
| 2:00 pm    | Moral Philosophy<br>HOB2 233  |                                  | Office Hours<br>HOB2 210         |            | Office Hours<br>HOB2 210      |
| 2:30 pm    |                               |                                  |                                  |            |                               |
| 3:00 pm    |                               |                                  |                                  |            |                               |

This example demonstrates all of the user-customizable options. Note several “features” of the package:

1. Appointments falling outside of the specified time range for the schedule are automatically truncated to fit. If the appointment falls entirely outside of the time range, it is not printed at all.
2. The command `\class` is predefined to chart appointments pertaining to class attendance. New appointment types may be defined by the user via the `\NewAppointment` command. The new appointments may use any predefined color for the text or background. Note that the `color` package allows one to define new colors.
3. The boxes created to represent appointments are sized to be accurate to the minute. In other words, if you have two appointments, one 52 minutes long

and the other 53 minutes long, the box representing the second appointment will be slightly longer.

4. The schedule is typeset in a centered displayed environment.

### 3 User Commands

|                              |  |
|------------------------------|--|
| <code>\CellHeight</code>     | Including <code>\CellHeight&lt;length&gt;</code> before the <code>schedule</code> environment tells $\text{\LaTeX 2}_{\epsilon}$ what height to make the cells in the schedule (all cells have the same height). Since a cell corresponds to an hour in the schedule, this command allows the user to specify how much vertical space a single hour ought to take up.  |
| <code>\CellWidth</code>      | Including <code>\CellWidth&lt;width&gt;</code> before the <code>schedule</code> environment tells $\text{\LaTeX 2}_{\epsilon}$ how wide to make every cell in the schedule. The overall width of the schedule is determined by multiplying this value by the number of days (set by the <code>\FiveDay</code> or <code>\SevenDay</code> command), plus the width of the time labels on the left-hand side.   |
| <code>\TimeRange</code>      | This command must appear before the <code>schedule</code> environment, otherwise $\text{\LaTeX 2}_{\epsilon}$ will not know how deep to make the grid. It is important to note that the time range is specified using a 24-hour format, with a <i>single</i> hyphen between the two times. Deviating from this format will generate an error.  |
| <code>\SubUnits</code>       | The <code>\SubUnits&lt;number&gt;</code> tells the package how to subdivide the hour. If one does not want any subdivisions, simply use <code>\SubUnits{60}</code> . The value of <code>&lt;number&gt;</code> can be any number than evenly divides 60. It is assumed that, in specifying this value, you know what you are doing: i.e., if you tell $\text{\LaTeX 2}_{\epsilon}$ to use a <code>\CellHeight</code> of 1in, but then set <code>\SubUnits{3}</code> , you will get 20 subdivisions (with times) in a cell only 1in high. In other words, the text on the left-hand side of the schedule will be typeset as a horrible mess. The solution is simple: if you want a large number of subdivisions, simply set <code>\CellHeight</code> to a greater value. |
| <code>\BeginOn</code>        | Including <code>\BeginOn&lt;day&gt;</code> tells $\text{\LaTeX}$ what day of the week to start the schedule on. The possible values are ‘Sunday’, ‘Monday’, ‘Tuesday’, ‘Wednesday’, ‘Thursday’, ‘Friday’, or ‘Saturday’. My apologies for non-English speaking users of $\text{\LaTeX}$ . If there is a demand for it, I will fix this in future releases.   |
| <code>\TextSize</code>       | With the <code>\TextSize&lt;font-size&gt;</code> command, the user tells $\text{\LaTeX}$ what size font to use when typesetting the text inside the boxes. This command ought to be one of the standard $\text{\LaTeX}$ font-size commands, e.g., <code>\tiny</code> , <code>\scriptsize</code> , etc. Using two large of a font will almost always result in bad line breaks inside the boxes, though, due to the narrow width of a cell.   |
| <code>\FiveDay</code>        | Tells $\text{\LaTeX}$ to typeset a five-day schedule.  |
| <code>\SevenDay</code>       | Tells $\text{\LaTeX}$ to typeset a seven-day schedule.   |
| <code>\NewAppointment</code> | By using the <code>\NewAppointment</code> command, the user can customize the appearance of the schedule by changing the color of the text or the background color. The syntax is <code>\NewAppointment&lt;appointment-name&gt;&lt;background-color&gt;&lt;text-color&gt;</code> .   |

## 4 Source Code

```
1 \ProvidesFile{schedule.sty}
2 \NeedsTeXFormat{LaTeX2e}[2005/12/01]
3 \ProvidesPackage{schedule}[2019/7/26 v1.10 schedule package]
4 \RequirePackage{calc}
5 \RequirePackage{xcolor}
6 \definecolor{dark}{gray}{.75}
7 %
8 % CONSTANTS FOR THE WEEK
9 %
10 \def\@sunday{Su}
11 \def\@Sunday{Sunday}
12 \def\@monday{M}
13 \def\@Monday{Monday}
14 \def\@tuesday{T}
15 \def\@Tuesday{Tuesday}
16 \def\@wednesday{W}
17 \def\@Wednesday{Wednesday}
18 \def\@thursday{Th}
19 \def\@Thursday{Thursday}
20 \def\@friday{F}
21 \def\@Friday{Friday}
22 \def\@saturday{Sa}
23 \def\@Saturday{Saturday}
24 %
25 % COUNTERS, LENGTHS, ETC.
26 %
27 \newlength{\cell@height}
28 \setlength{\cell@height}{1in}
29 \newlength{\cell@width}
30 \setlength{\cell@width}{1in}
31 \newlength{\box@depth}
32 \newcounter{sch@col@width} \setcounter{sch@col@width}{60}
33 \newlength{\box@width}
34 \setlength{\box@width}{1in*(\value{sch@col@width}/60)}
35 \newlength{\col@width}
36 \setlength{\col@width}{1in*(\value{sch@col@width}/60)}
37 \newlength{\sch@depth} \setlength{\sch@depth}{9in}
38 \newlength{\fill@length}
39 \newlength{\@temp@length}
40 \newlength{\@@temp@length}
41 \newlength{\line@thickness} % The thickness of the lines in the drawing
42 \setlength{\line@thickness}{.4pt}
43 \newlength{\adjusted@cell@width}
44 \newlength{\adjusted@cell@height}
45
46 \newcounter{picture@units@wide}
47 \newcounter{xcoords}
48 \newcounter{ycoords}
```

```

49 \newcounter{timea}
50 \newcounter{timeb}
51 \newcounter{grid@width}
52 \newcounter{grid@height}
53 \newcounter{number@of@cells} % The number of VERTICAL cells
54 \newcounter{number@of@subcells}
55 \newcounter{number@of@days} % The number of days in the grid
56 \newcounter{dp@vlines} % The number of vertical lines actually needed is
57 % \value{number@of@days} + 1 ...
58 \newcounter{dp@hlines} % The number of horizontal lines actually needed is
59 % \value{number@of@cells} + 1 ...
60 \newcounter{dp@hcell@lines} % The number of horizontal lines that are
61 % either (1) associated with an hour, or
62 % (2) on the top or bottom of the grid.
63 \newcounter{pu@cell@width}
64 \newcounter{pu@cell@height}
65 \setcounter{pu@cell@height}{60}
66 \newcounter{pu@grid@top}
67 \newcounter{pu@grid@width}
68 \newcounter{pu@subticks}
69 \newcounter{start@time}
70 \newcounter{end@time}
71 \newcounter{x@coord} % Temporary x-coordinate
72 \newcounter{y@coord} % Temporary y-coordinate
73 \newcounter{@tempc}
74 \newcounter{@tempd}
75 \newcounter{label@sep} % distance from label to gride
76 \setcounter{label@sep}{5} %initialized to 5 picture units
77
78 \newcounter{x@Sunday}
79 \newcounter{x@Monday}
80 \newcounter{x@Tuesday}
81 \newcounter{x@Wednesday}
82 \newcounter{x@Thursday}
83 \newcounter{x@Friday}
84 \newcounter{x@Saturday}
85
86 \newsavebox{\temp@box}
87 \newif\ifweekends
88 \newcount\@i
89 \newcount\@j
90
91 \def\TimeRange#1{\compute@number@of@cells #1\end@compute}
92 \def\compute@number@of@cells#1:#2-#3:#4\end@compute{%
93 \setcounter{number@of@cells}{#3-#1}%
94 \setcounter{start@time}{#1}%
95 \setcounter{end@time}{#3}}
96
97 \def\TextSize#1{\def\appt@textsize{#1}}
98 \TextSize{\scriptsize}

```

```

99
100 \def\IncludeWeekends{\weekendstrue}
101 \def\NoWeekends{\weekendsfalse}
102
103 \def\SevenDay{\weekendstrue}
104 \def\FiveDay{\weekendsfalse}
105
106 \def\CellHeight#1{\setlength{\cell@height}{#1}%
107     \setlength{\unitlength}{\cell@height*\ratio{1pt}{60pt}}}
108 \def\CellWidth#1{\setlength{\cell@width}{#1}%
109     \setcounter{pu@cell@width}{1*\ratio{\cell@width}{\unitlength}}}
110 \def\SubUnits#1{\setcounter{pu@subticks}{#1}%
111     \setcounter{number@of@subcells}{60/\value{pu@subticks}}}
112
113 \def\calculate@grid@dimensions{%
114     \ifweekends \setcounter{number@of@days}{7}
115     \else \setcounter{number@of@days}{5}%
116     \fi%
117     \setcounter{dp@hcell@lines}{\value{number@of@cells}+1}
118     \setcounter{grid@width}{\value{number@of@days}*\value{pu@cell@width}}%
119     \setcounter{grid@height}{\value{number@of@cells}*60}
120     \setcounter{dp@vlines}{\value{number@of@days}+1}
121     \setcounter{dp@hlines}{\value{number@of@cells}*(60/\value{pu@subticks}) + 1}}
122
123
124 \def\draw@grid{%\calculate@grid@dimensions
125     \linethickness{.2pt}%
126     \multiput(0,0)(0,\value{pu@subticks}){\value{dp@hlines}}{\line(1,0){\value{grid@width}}}%
127     \thicklines
128     \multiput(0,0)(0,60){\value{dp@hcell@lines}}{\line(1,0){\value{grid@width}}}
129     \thinlines}
130
131 \def\LineThickness#1{\setlength{\line@thickness}{#1}%
132     \linethickness{\line@thickness}%
133     \setlength{\adjusted@cell@width}{\cell@width - 1\line@thickness}
134     \setlength{\adjusted@cell@height}{\cell@height - 1\line@thickness}}
135
136
137 \def\@Su@week{{Sunday} {Monday} {Tuesday} {Wednesday} {Thursday} {Friday} {Saturday}}
138 \def\@M@week{{Monday} {Tuesday} {Wednesday} {Thursday} {Friday} {Saturday} {Sunday}}
139 \def\@T@week{{Tuesday} {Wednesday} {Thursday} {Friday} {Saturday} {Sunday} {Monday}}
140 \def\@W@week{{Wednesday} {Thursday} {Friday} {Saturday} {Sunday} {Monday} {Tuesday}}
141 \def\@Th@week{{Thursday} {Friday} {Saturday} {Sunday} {Monday} {Tuesday} {Wednesday}}
142 \def\@F@week{{Friday} {Saturday} {Sunday} {Monday} {Tuesday} {Wednesday} {Thursday}}
143 \def\@Sa@week{{Saturday} {Sunday} {Monday} {Tuesday} {Wednesday} {Thursday} {Friday}}
144
145 \def\BeginOn#1{\def\start@day{#1}}
146
147 \def\add@labels{%
148     \ifx\start@day\@Sunday \expandafter\do@days\@Su@week \relax

```

```

149 \else\ifx\start@day\@Monday \expandafter\do@days\@M@week \relax
150 \else\ifx\start@day\@Tuesday \expandafter\do@days\@T@week \relax
151 \else\ifx\start@day\@Wednesday \expandafter\do@days\@W@week \relax
152 \else\ifx\start@day\@Thursday \expandafter\do@days\@Th@week \relax
153 \else\ifx\start@day\@Friday \expandafter\do@days\@F@week \relax
154 \else\expandafter\do@days\@Sa@week \relax
155 \fi\fi\fi\fi\fi\fi}
156
157
158 \def\@sfor #1:=#2 \upto #3 \step #4 \do #5{%
159 #1=#2\relax%
160 \@whilenum #1<#3 \do {#5 \advance#1 by #4}#5}
161
162 \def\add@times{%
163 \setcounter{@tempc}{\value{start@time}}%
164 \@sfor \@i :=0 \upto \value{number@of@cells} \step 1 \do%
165 { \setcounter{x@coord}{0}% Set the x-coord right
166 \setcounter{y@coord}{\value{grid@height}-60*\@i}% adjust for the right hour cell
167 \ifnum\value{@tempc}=0%
168 \setcounter{@tempd}{\value{@tempc}+12}%
169 \put(\value{x@coord},\value{y@coord}){%
170 \makebox(0,0)[r]{\the@tempd:00 midnight\ }}% Midnight Hack
171 \else\ifnum\value{@tempc}=24%
172 \setcounter{@tempd}{\value{@tempc}-12}%
173 \put(\value{x@coord},\value{y@coord}){%
174 \makebox(0,0)[r]{\the@tempd:00 midnight\ }}% Midnight Hack
175 \else\ifnum\value{@tempc}>12%
176 \setcounter{@tempd}{\value{@tempc}-12}%
177 \put(\value{x@coord},\value{y@coord}){%
178 \makebox(0,0)[r]{\the@tempd:00 pm\ }}%
179 \else\ifnum\value{@tempc}=12%
180 \setcounter{@tempd}{\value{@tempc}}%
181 \put(\value{x@coord},\value{y@coord}){%
182 \makebox(0,0)[r]{\the@tempd:00 noon\ }}% Noontime Hack
183 \else\put(\value{x@coord},\value{y@coord}){%
184 \makebox(0,0)[r]{\the@tempc:00 am\ }}%
185 \fi\relax%
186 \fi\relax%
187 \fi\relax%
188 \fi\relax%
189 \@sfor \@j := \value{pu@subticks} \upto 59 \step \value{pu@subticks} \do%
190 { \ifnum\@i=\value{number@of@cells}% Test to see if this should be the last label
191 \relax%
192 \else%
193 \ifnum\@j=60%
194 \relax%
195 \else%
196 \ifnum\@j<10%
197 \def\the@minutes{0\the\@j}%
198 \else\def\the@minutes{\the\@j}%

```

```

199         \fi%
200         \setcounter{y@coord}{\value{y@coord}-\@j}%
201         \ifnum\value{@tempc}=0%
202             \setcounter{@tempd}{\value{@tempc}+12}%
203             \put(\value{x@coord},\value{y@coord}){%
204                 \makebox(0,0)[r]{\tiny\the@tempd:\the@minutes\ am\ }}% Hack to get 12:xx AM ri
205         \else\ifnum\value{@tempc}=24%
206             \setcounter{@tempd}{\value{@tempc}-12}%
207             \put(\value{x@coord},\value{y@coord}){%
208                 \makebox(0,0)[r]{\tiny\the@tempd:\the@minutes\ am\ }}% Hack to get 12:xx AM ri
209         \else\ifnum\value{@tempc}>12%
210             \setcounter{@tempd}{\value{@tempc}-12}%
211             \put(\value{x@coord},\value{y@coord}){%
212                 \makebox(0,0)[r]{\tiny\the@tempd:\the@minutes\ pm\ }}% ...write the time (usin
213         \else\ifnum\value{@tempc}=12%
214             \setcounter{@tempd}{\value{@tempc}}%
215             \put(\value{x@coord},\value{y@coord}){%
216                 \makebox(0,0)[r]{\tiny\the@tempd:\the@minutes\ pm\ }}% Hack to get 12:xx PM ri
217         \else\put(\value{x@coord},\value{y@coord}){%
218             \makebox(0,0)[r]{\tiny\the@tempc:\the@minutes\ am\ }}% ...write the time (using a
219         \fi%
220         \fi%
221     \fi%
222     \fi%
223     \fi%
224     \fi%
225     \setcounter{y@coord}{\value{y@coord}+\@j}%
226     \addtocounter{@tempc}{1}}}%
227
228 \def\do@days#1#2#3#4#5#6#7{%
229     \setcounter{x@coord}{1*\ratio{\value{pu@cell@width} pt}{2 pt}}%
230     \setcounter{y@coord}{\value{grid@height}+\value{label@sep}}%
231     \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #1}}%
232     \setcounter{x@coord}{\value{x@coord}+\value{pu@cell@width}}%
233     \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #2}}%
234     \setcounter{x@coord}{\value{x@coord}+\value{pu@cell@width}}%
235     \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #3}}%
236     \setcounter{x@coord}{\value{x@coord}+\value{pu@cell@width}}%
237     \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #4}}%
238     \setcounter{x@coord}{\value{x@coord}+\value{pu@cell@width}}%
239     \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #5}}%
240     \setcounter{x@coord}{\value{x@coord}+\value{pu@cell@width}}%
241     \ifweekends
242         \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #6}}%
243         \setcounter{x@coord}{\value{x@coord}+\value{pu@cell@width}}%
244         \put(\value{x@coord},\value{y@coord}){\makebox(0,0)[b]{\large #7}}\fi%
245
246
247 \def\set@x@coords@for@days{%
248     \ifx\start@day\Sunday%

```



```

249 \@i=0\relax%
250 \@tfor \@temp := {Sunday} {Monday} {Tuesday} {Wednesday} {Thursday} {Friday} {Saturday} \do
251 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
252 \advance\@i by 1}
253 \def\skipday@i{F}
254 \def\skipday@ii{Sa}\fi
255 \ifx\start@day\@Monday
256 \@i=0\relax%
257 \@tfor \@temp := {Monday} {Tuesday} {Wednesday} {Thursday} {Friday} {Saturday} {Sunday} \do
258 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
259 \advance\@i by 1}
260 \def\skipday@i{Sa}
261 \def\skipday@ii{Su}\fi
262 \ifx\start@day\@Tuesday
263 \@i=0\relax%
264 \@tfor \@temp := {Tuesday} {Wednesday} {Thursday} {Friday} {Saturday} {Sunday} {Monday} \do
265 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
266 \advance\@i by 1}
267 \def\skipday@i{Su}
268 \def\skipday@ii{M}\fi
269 \ifx\start@day\@Wednesday
270 \@i=0\relax%
271 \@tfor \@temp := {Wednesday} {Thursday} {Friday} {Saturday} {Sunday} {Monday} {Tuesday} \do
272 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
273 \advance\@i by 1}
274 \def\skipday@i{M}
275 \def\skipday@ii{T}\fi
276 \ifx\start@day\@Thursday
277 \@i=0\relax%
278 \@tfor \@temp := {Thursday} {Friday} {Saturday} {Sunday} {Monday} {Tuesday} {Wednesday} \do
279 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
280 \advance\@i by 1}
281 \def\skipday@i{T}
282 \def\skipday@ii{W}\fi
283 \ifx\start@day\@Friday
284 \@i=0\relax%
285 \@tfor \@temp := {Friday} {Saturday} {Sunday} {Monday} {Tuesday} {Wednesday} {Thursday} \do
286 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
287 \advance\@i by 1}
288 \def\skipday@i{W}
289 \def\skipday@ii{Th}\fi
290 \ifx\start@day\@Saturday
291 \@i=0\relax%
292 \@tfor \@temp := {Saturday} {Sunday} {Monday} {Tuesday} {Wednesday} {Thursday} {Friday} \do
293 {\setcounter{x@\@temp}{\@i*value{pu@cell@width}}}%
294 \advance\@i by 1}
295 \def\skipday@i{Th}
296 \def\skipday@ii{F}\fi
297 }
298

```

```

299 % -----
300 % Commands to insert info about an appointment
301 % -----
302 \newif\ifset@start@time
303 \newif\ifset@end@time
304 \newif\ifsetboxdepth
305 \newif\ifinrange
306
307 \def\NewAppointment#1#2#3{% #1 = name, #2 = background color, #3 = textcolor
308   \expandafter\def\csname #1\endcsname##1##2##3##4{%
309     \setboxdepthtrue% assume we want to calculate the box depth
310     \inrangetrue% assume the appt is in range
311     \set@start@timetrue% assume we want to calculate the start time
312     \set@end@timetrue% assume we want to calculate the end time
313     \@includetrue% assume we will include it
314     \edef\appt@name{#1}% save the appt name
315     \edef\appt@color{#2}% save the background color
316     \edef\appt@textcolor{#3}% save the save color
317     \expandafter\def\csname #1@name\endcsname{##1}% save the name
318     \expandafter\def\csname #1@location\endcsname{##2}% save the loc.
319     \expandafter\def\csname #1@days\endcsname{##3}% save the days
320     \expandafter\def\csname #1@time\endcsname{##4}% save the time
321     \place@appt@box##3,\stop}}
322
323 \NewAppointment{class}{dark}{black}
324
325 \def\place@appt@box#1{%
326   \ifx#1\stop \let\@next=\@gobble%
327   \else \let\@next=\set@x@coords\fi\@next#1}
328
329 \def\set@x@coords#1,{\def\the@day{#1}%
330   \ifx\the@day\@sunday\setcounter{xcoords}{\value{x@Sunday}}}%
331   \else\ifx\the@day\@monday\setcounter{xcoords}{\value{x@Monday}}}%
332   \else\ifx\the@day\@tuesday\setcounter{xcoords}{\value{x@Tuesday}}}%
333   \else\ifx\the@day\@wednesday\setcounter{xcoords}{\value{x@Wednesday}}}%
334   \else\ifx\the@day\@thursday\setcounter{xcoords}{\value{x@Thursday}}}%
335   \else\ifx\the@day\@friday\setcounter{xcoords}{\value{x@Friday}}}%
336   \else\setcounter{xcoords}{\value{x@Saturday}}}%
337   \fi\fi\fi\fi\fi\fi%
338   \edef\@temp{\csname \appt@name @time\endcsname}%
339   \expandafter\set@y@coords\@temp\stop}
340
341 \def\set@y@coords#1:#2-#3:#4\stop{%
342   \def\@starthour{#1}%
343   \def\@startminutes{#2}%
344   \def\@endhour{#3}%
345   \def\@endminutes{#4}%
346   \ifnum#1<\value{start@time} \setcounter{ycoords}{\value{grid@height}}}%
347   \edef\@starthour{\value{start@time}}
348   \def\@startminutes{0}

```

```

349             \set@start@timefalse%
350             \fi%
351 \ifnum#3<\value{end@time} \relax%
352   \else \edef\@endhour{\value{end@time}}
353         \def\@endminutes{0}%
354         \setcounter{ycoords@bot}{0}
355         \set@end@timefalse
356 \fi %
357 \ifset@start@time%
358   \setcounter{ycoords}{\value{grid@height}-(60*(#1-\value{start@time})+#2)}\fi%
359 \ifset@end@time%
360   \setcounter{ycoords@bot}{\value{grid@height}-(60*(#3-\value{start@time})+#4)}\fi%
361 \setlength{\box@depth}{\@endhour\cell@height + (\cell@height*\ratio{\@endminutes pt}{60pt}) %
362   - \@starthour\cell@height - (\cell@height*\ratio{\@startminutes pt}{60pt})}%
363 \ifnum#1<\value{end@time} \relax\else \inrangefalse \fi%
364 \draw@appt@box\place@appt@box}
365
366 \newif\if@include
367
368 \def\draw@appt@box{%
369   \ifweekends \relax % if we use 7-days, this won't change
370   \else \ifx \the@day\skipday@i \@includefalse \fi % first condition for change
371         \ifx \the@day\skipday@ii \@includefalse \fi\fi % second condition for change
372 \ifinrange \relax\else \@includefalse \fi %
373 \if@include %
374   \put(\value{xcoords},\value{ycoords}){\colorbox{\appt@color}{\parbox[t]{\cell@width}{\ %
375     \vspace{\box@depth}}}}
376   \thinlines
377   \put(\value{xcoords},\value{ycoords}){\line(1,0){\value{pu@cell@width}}}
378   \put(\value{xcoords},\value{ycoords@bot}){\line(1,0){\value{pu@cell@width}}}
379   \put(\value{xcoords},\value{ycoords}){%
380     \ \parbox[t]{\cell@width-8pt}{\mbox{}\ \ \appt@textsize %
381       \ifdim\box@depth>\baselineskip
382         \textcolor{\appt@textcolor}{\csname \appt@name @name\endcsname} \ \ %
383         \ifdim\box@depth>2\baselineskip
384           \textcolor{\appt@textcolor}{\csname \appt@name
385             @location\endcsname}\fi\fi }}\fi}
386
387 \def\convert@class@time#1:#2-#3:#4\end@time{%
388   {\count1=#1\relax%
389     \count3=#3\relax%
390     \ifnum#1>12 \advance\count1 by -12\fi\relax%
391     \ifnum#3>12 \advance\count3 by -12\fi\relax%
392     \ifnum#1<12\relax%
393       \ifnum#3<12\relax \mbox{\the\count1:#2am--\the\count3:#4am}\relax%
394       \else \mbox{\the\count1:#2am--\the\count3:#4pm}\fi\relax%
395       \else \mbox{\the\count1:#2pm--\the\count3:#4pm}\fi\relax}}
396
397 \def\compute@box@depth#1:#2-#3:#4\end@bx{%
398   \setlength{\box@depth}{#3\cell@height + (\cell@height*\ratio{#4pt}{60pt}) %

```

```

399         - #1\cell@height - (\cell@height*\ratio{#2pt}{60pt}}}}
400
401 \newcounter{ycoords@bot}
402
403 \newcounter{x@tempa}
404 \newcounter{x@tempb}
405 \newcounter{y@tempa}
406 \newcounter{y@tempb}
407 \newcounter{temp@cnt@a}
408
409 \newlength{\title@height}
410 \newlength{\label@height}
411 \settoheight{\label@height}{Wednesday}
412
413 \newcounter{pu@label@width}
414 \newlength{\center@hack}
415
416 \newenvironment{schedule}[1][:]{%
417 {\bigskip
418 \calculate@grid@dimensions%
419 \setcounter{pu@grid@width}{\value{pu@cell@width}*\value{number@of@days}}%
420 \settowidth{\@temp@length}{\normalsize 12:00\ pm\ }%
421 \setcounter{pu@label@width}{1*\ratio{\@temp@length}{\unitlength}}%
422 \setcounter{pu@grid@top}{\value{grid@height}+(1*\ratio{\label@height}{\unitlength}) + %
423 (1*\ratio{.25in}{\unitlength})}%
424 \if#1:\relax \else%
425 \settoheight{\title@height}{\large #1}%
426 \addtocounter{pu@grid@top}{1*\ratio{\title@height}{\unitlength}}%
427 \fi%
428 \setlength{\center@hack}{(.5\linewidth-.5\unitlength*\value{pu@grid@width}+%
429 .5\unitlength*\value{pu@label@width})}%
430 \noindent\hspace*{\center@hack}%
431 \begin{picture}(\value{pu@grid@width},\value{pu@grid@top})%
432 \draw@grid
433 \add@labels
434 \if#1:\relax \else
435 \setcounter{ycoords}{\value{grid@height}+(1*\ratio{\label@height}{\unitlength}) + %
436 (1*\ratio{.25in}{\unitlength})}
437 \setcounter{xcoords}{1*\ratio{\value{pu@grid@width} pt}{2 pt}}
438 \put(\value{xcoords},\value{ycoords}){\makebox(0,0)[b]{\Large #1}}
439 \fi
440 \add@times
441 \set@x@coords@for@days}
442 {\multiput(0,0)(\value{pu@cell@width},0){\value{dp@vlines}}{\line(0,1){\value{grid@height}}}
443 \end{picture}\bigskip}
444
445 \setlength{\fboxsep}{0in}

```

## Change History

|                                     |   |
|-------------------------------------|---|
| v1.00                               | v1.10   |
| General: Initial version. . . . . 1 | General: Clarified ‘noon’ and<br>‘midnight’ for 12:00 . . . . . 1 |

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