NAME

prerex_format -- a format for prerequisite-chart descriptions

DESCRIPTION

This manual describes the format of prerequisite-chart descriptions that can be processed by **[pdf]latex** (normally using a suitable **prerex.sty**(7) style file) and edited using the **prerex**(1) interactive editor (or by any conventional text editor).

TERMINOLOGY

A prerequisite chart consists of a number of *course boxes,* linked by *arrows.* Courses are either *half* or *full,* and may be *required* or *optional* (or neither). Each course box can contain a course *code* (upper left corner), a course *title* (lower half), and *timetable* information (upper right corner). An arrow can be either a *prerequisite* (solid), a *corequisite* (dotted), or *recommended* (dashed). When a conventional arrow would be inappropriate, a *mini* course just above a target box can be used.

STRUCTURE

The file should contain exactly one instance of a LaTeX environment

\begin{chart} *instruction ...* **\end{chart}**

with at most one *instruction* per line. Note that a program such as **prerex**(1) analyzes prerex-format files *without* using TeX; for example, macro definitions will be ignored and macro calls will not be expanded.

Instructions may be preceded by white space. Lines that start with % are treated as comments and ignored. The order of instructions is not significant except that the instruction for the source and target box o an arrow should *precede* the instruction for the arrow. The instruction formats are described in the following sections.

COURSE BOXES

The instructions producing course boxes have the following forms:

\halfcourse *x,y***:{***code***}{***title***}{***timetable***}**

\fullcourse *x,y***:{***code***}{***title***}{***timetable***}**

\reqhalfcourse *x,y***:{***code***}{***title***}{***timetable***}**

\reqfullcourse *x,y***:{***code***}{***title***}{***timetable***}**

\opthalfcourse *x,y***:{***code***}{***title***}{***timetable***}**

\optfullcourse *x,y***:{***code***}{***title***}{***timetable***}**

where *x,y* are the coordinates of the *centerpoint* of the box, relative to the origin of the coordinate system at the lower-left corner of the diagram. The *code, title,* and *timetable* arguments are arbitrary (well-bracketed) text, possibly with LaTeX markup.

The following are similar but take an additional argument to specify the (non-default) background color of the course box:

\halfcoursec *x,y***:{***code***}{***title***}{***timetable***}{***color***}**

\fullcoursec *x,y***:{***code***}{***title***}{***timetable***}{***color***}**

\reqhalfcoursec *x,y***:{***code***}{***title***}{***timetable***}{***color***}**

\reqfullcoursec *x,y***:{***code***}{***title***}{***timetable***}{***color***}**

\opthalfcoursec *x,y***:{***code***}{***title***}{***timetable***}{***color***}**

\optfullcoursec *x,y***:{***code***}{***title***}{***timetable***}{***color***}**

MINI COURSE BOXES AND TEXT

A mini course is produced by an instruction of the form

\mini *x,y***:{***code***}**

A text line is inserted into the chart by an instruction of the form

\text *x,y***:{***line-of-text***}**

The maximum allowed length of a course-code may be smaller that the maximum allowed for a line of text.

ARROWS

Arrows between course boxes (or from a mini to a course box) are produced by instructions of the form

\prereq *x0,y0,x1,y1***:**

\coreq *x0,y0,x1,y1***:**

\recomm *x0,y0,x1,y1***:**

These produce, respectively, solid, dotted, and dashed arrows from the course box (or mini) centered at coordinates *x0,y0* to the course box centered at coordinates *x1,y1*.

In some implementations, certain arrows by default have a non-zero curvature. It is possible to override the default curvature for a particular arrow by using the instructions

\prereqc *x0,y0,x1,y1;c***:**

\coreqc *x0,y0,x1,y1;c***:**

\recommc *x0,y0,x1,y1;c***:**

where *c* is an integer in the range 0-100 specifying the desired curvature; for example, *c*=0 will produce a *straight* arrow. To change the default curvature, the user program may redefine the **\DefaultCurvature** command.

COORDINATE GRID

The following instruction produces a coordinate grid, which is useful for editing a diagram:

\grid

This is normally placed before all the other instructions so that grid lines are in the background, covered by course boxes, minis, and arrows.

WEB LINKS

Course boxes may be linked to web addresses. The URL for course boxes may be set by the user by redefining the **\CourseURL** command; when called for a course box, it is supplied with three arguments, the *x* and *y* coordinates of the box, mini, or textline, and the *code* argument of the course box. For example,

\renewcommand{\CourseURL}[3]{http://www.cs.queensu.ca/undergraduate/courses/#3.html}

is appropriate for courses at the School of Computing, Queen's University. The first two

arguments can be used to display the coordinates of a box, mini, or textline in some PDF viewers while the mouse hovers over it when the source file is being edited.

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SEE ALSO

prerex(1), **prerex.sty**(7).