

NAME

plt - plot and provide a graphical display of data in a file

SYNOPSIS

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plt [xlim] [ylim] [xlabel] [gttl] [mltg] [linf] [bgrf] [sldf]
[idxf] [crtf] [lprf] <filename>
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DESCRIPTION

Plt produces a graphical display of the data contained in the data file 'filename'. By default, plt will normalize the graph. In other words, plt will make the largest and smallest x- and y-coordinates the upper and lower boundaries for the graph. The ascii numbers in the data file may be separated by any combination of tabs, spaces, and/or newlines. Integers or decimals may be placed in this data file (i.e. 3, -3, 3.5, 3.05, .05, 3.0005, etc.). However, only the first two digits to the right of the decimal point will be used, regardless of the number of digits to the right of the said point. A colon ':' is used to separate the points to be used for one plot from those to be used for another plot. An error message will be printed and the program will exit if the data contains any characters other than numbers.

OPTION

The following options may also be used:

xlim iXXhXX

allows the user to determine the minimum and maximum abscissa points. The low limit must be given before the high limit and there must be no spaces between the limits themselves. The numerical limits may be given in either integer or decimal form (i.e. 3, 03, 3.5, 3.05, 3.0005, .04, etc.). If given in decimal form, any number of digits to the right of the decimal point may be entered, but only the first two will be used. The delimiters and the limits must be entered immediately after the keyword 'xlim'. When the x-axis limits are given in this fashion, normalization of the points on the x-axis is not performed. Error messages will be printed and the program will terminate if the delimiters and limits are not entered in their proper sequence, if characters are interspersed in the limits, or if the low limit is greater than the high limit. Negative numbers may be given also.

ylim iXXhXX

allows the user to determine

the minimum and maximum ordinate points. The usage is the same as the 'xlim' argument. The delimiters and limits must be entered immediately after the keyword 'ylim'. When the y-axis limits are given in this fashion, normalization of the points on the y-axis is not performed.

xlbl HH HHHH HHH

allows the user to determine the label for the x-axis. All of

the characters within the double quotes which must follow the 'xlbl' keyword will be printed as the label for the x-axis. An error message will be printed if the number of characters in the label are longer than the space allowed for it in the particular format (see the arguments 'crtf' and 'lprf' for format explanation), and the program will exit.

yibl HH HHHH HHH

allows the user to determine the label for the y-axis. The usage for the y-axis label argument is the same as that for the x-axis label argument.

gttl HH HHHH HHH

allows the user to determine the title for the graph. The usage for the graph title argument is the same as that for the x-axis label argument.

mltg pXX

allows the user to have more than one set of points plotted on a graph, where 'XX' is the number of graphs to be plotted. If the number of plots requested is more than the maximum number allowed in the program code will exit. If the number of plots requested is less than the number of sets of points represented by the data file, only the plots for which there is data are plotted (i.e. if the user requests three plots and data exists for only two plots, only two plots will appear on the graph). If 'XX' is zero, no points will be plotted and the x-axis and y-axis numerical labels will all be '0.00'. However, if limits are given, the x- and y-axis labels will be correctly printed as normal but there will be no points on the graph. If this argument is not used, plt will default and plot only one set of points on a graph, irrespective of the number of sets of points represented by data in the data file.

linf

allows the user to create a line graph format. A vertical line will be drawn from the point to the x-axis using the same character as the point itself. This format cannot be used when multiple plots are being made.

bgrf

allows the user to create a bar graph format. The area vertically below and horizontally over to one space behind the next point will be filled in with the same character as the point itself. In other words, the bars will be separated by a column of blank space. In order for a bar graph to be made therefore, there must be at least one column of blank space between two points. If this margin does not exist, some of the points on the graph may not appear. This format cannot be used when multiple plots are being made.

sldf

allows the user to create a solid graph format. The area

vertically below and horizontally over to the next point to the right will be filled in with the same character as the point itself. This format cannot be used when multiple plots are being made.

idxf

produces a display specially formatted for office indices. The data is read from an octal file created by another program.

crtf

scales the graph down to a format that will fit on a crt screen. If neither this argument nor the '**lprf**' (see below) argument is used, plt defaults to a format which will fit on an 8 1/2 by 11 inch page.

lprf

scales the graph to a format that will fit on a 14 by 11 inch page. If neither this argument nor the '**crtf**' (see above) argument is used, plt defaults to a format which will fit on an 8 1/2 by 11 inch page.

DIAGNOSTICS

An error message will be printed if the data file does not exist.

BUGS

plt may not yield an accurate graph if the range between limits is less than six, or if the upper limit (on either of the axes) is zero.