NAME

histo - compute 1-dimensional histogram of N data columns

SYNOPSIS

histo [-c][-p] xmin xmax nbins
histo [-c][-p] imin imax

DESCRIPTION

Histo bins columnular data on the standard input between the given minimum and maximum values. If three command line arguments are given, the third is taken as the number of data bins between the first two real numbers. If only two arguments are given, they are both assumed to be integers, and the number of data bins will be equal to their difference plus one. The bins are always of equal size.

The output is N+1 columns of data (for N columns input), where the first column is the centroid of each division, and each row corresponds to the frequencies for each column around that value.

If the *−c* option is present, then *histo* computes the cumulative histogram for each column instead of the straight frequencies. The upper value of each bin is printed also instead of the centroid. This may be useful in computing percentiles, for example. Values below the minimum specified are still counted in the cumulative total.

The *−p* option tells *histo* to report the percentage of the total number of input lines rather than the absolute counts. In the case of a cumulative total, this yields the percentile values directly. Values above the maximum are counted as well as values below in this case.

All input data is interpreted as real values, and columns must be white-space separated. If any value is less than the minimum or greater than the maximum, it will be ignored unless the *−c* option is specified.

EXAMPLES

To count data values between −1 and 1 in 50 bins:

```
histo −1 1 50 < input.dat
```

To count frequencies of integers between 0 and 255:

```
histo 0 255 < input.dat
```

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SEE ALSO

cnt(1), neaten(1), rcalc(1), rcollate(1), rlam(1), rsplit(1), tabfunc(1), total(1)