

GNUMDATA Reference Card 1 / 4

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Syntax : `gnumdata filename`
Output : `gnumdata.log` (trace of actions)
 `gnumdata.cal` (computations)
 `gnumdata.sor` (new data file)
Example : `gnumdata essai.dat`

General format of actions : `nact numc namc [parm1 [parm2 [...]]`
nact is the name of the action to be executed
numc is the number of the column to be processed
namc is the number of that column
parm1, parm2... are the parameters of the action

Management actions

ADD	addition of two columns
CONC	concatenation of two columns
CONST	creation of a constant column
CREATE	creation of a new column name,type,length,decimals,unit,default
DAYS	computation of the number of past days from date columns
DELE	deletion of the column
DESCV	description (Name,Type,Length,Dec,Unit) of the column
DIV	division of two columns
LEFT	replacement of an empty value with the value on the left
LENGTH	definition of the length and decimals of the column
MUL	multiplication of two columns
NAME	designation of the column
NOBS	output of the data line number
PREC	replacement of an empty value with the value of previous line
RIGHT	replacement of an empty value with the value on the right
SUB	subtraction of two columns
TYPE	setting of the type of a column (C ou N)
ZERO	setting to zero all empty values

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Computation actions

CROSS	cross tabulation (contingency table)
CV	coefficient of variation (σ/m)
FREQ	frequency table
MAX	maximum of non empty values
MIN	minimum of non empty values
MEAN	mean m of non empty values
NBVAL	number of non empty values
STD	standard deviation σ of non empty values
SUM	sum of non empty values
UNIT	unit associated to the column
VAR	variance of non empty values

Option actions

FIRST	use of the first n lines
SKIP	skipping the first n lines
LAST	use of the last n lines
OUTC	definition of an alternate output file of computations
OUTS	definition of an alternate output file of trace
OUTL	definition of an alternate output file of data
RULER	output of a ruler on n characters
DBF	creation of a Dbase (.dbf) file (needs external dos program CreeDbf.exe for <i>Dos/Windows</i>)
PLOT	creation of the (.plt) file to get a plot with <i>gnuplot</i>
GIF	creation of the <i>gnuplot</i> file (.plt) to get image file GIF (needs external <i>gnuplot</i> version 3.5 patchlevel 349 ou greater)
SAS	creation of a .sas program to build the <i>SAS</i> data table

File naming conventions

.CAL	Computation output file (mean, fréquency table...)
.DAG	Input data file for <i>gnuplot</i>
.DAT	Input data file for gnumdata
.DBF	Dbase data file
.GIF	Image output file
.LOG	Trace output file
.PLT	Parameter input file for <i>gnuplot</i>
.SAS	Input programm file for <i>Sas</i>
.SDF	Standard data form output file
.SOR	Output data file
.STM	Actions file
.STR	Structure input fil for <i>Dbase</i>

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Details of of Actions

EXAMPLE OF ACTIONS FILE

```
# first describe the columns
Descv 1 Year      n 4 0 (year)
Descv 2 Mt        n 2 0 (month)
Descv 3 Dy        n 2 0 (day)
Descv 4 Volume    n 3 0 (gallons)
Descv 5 prevVol  n 3 0 (gallons)
# padd the values
Prec  1 Year
Prec  3 Dy
Right 4 Volume
Left  5 prevVol
# then make a new column
Create 6 Nd n 3 0 (nb_of_days) -99
# that gets the number of days from january 1st
Days  6 Nd 3 Dy 2 Mt
# build a constant column
Const 7 Cnt 1900 N 4 0 (century)
# add it to column 1 (result to be put in column 1)
Add   1 Year 7 Cnt
# and delete the constant column after having used it
Dele  7 Cnt
# now plot with gnuplot ; nothing on screen
# but a .GIF file with be produced
Plot  4 Nd 5 Volume Gif
# keep a copy of the trace file (with its warning)
Outl  tutor03.log
```

Syntax of each action

We denote by

<i>nl</i>	a line number,
<i>n</i> and <i>n_i</i>	a column number,
<i>cn</i> and <i>cn_i</i>	a column name,
<i>fn</i>	a file name,
<i>nc</i>	a number of characters,
<i>nd</i>	a number of decimals,
<i>rn</i>	a relative offset,
<i>v</i>	a value (numerical or character),
<i>t</i>	a data type (<i>N</i> or <i>C</i>),
<i>u</i>	a unit (<i>gallon</i> , <i>cm</i> , <i>kg</i> ...).
<i>vpf</i>	a default value

A word between square brackets [and] is optional.

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Syntax of Actions

Action Name	Parameters (if any)	Example
ADD	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Add 1 Long 2 Larg
CONC	$n_1 \text{ } cn_1 \text{ } n_2 \text{ } cn_2 \text{ } n_3 \text{ } cn_3$ [Sym.v]	Conc 3 Time 1 Hr 2 Min Symbol h
CONST	$n \text{ } cn \text{ } v \text{ } t \text{ } nc \text{ } nd \text{ } u$	Const 4 Weight -1 N 3 0 kg
CREATE	$n \text{ } cn \text{ } t \text{ } nc \text{ } nd \text{ } u \text{ } vpf$	Create 1 Long N 7 1 mile(s) -1
CROSS	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Cross 1 Sex 2 Town
CV	$c \text{ } cn$	Cv 1 Width
DAYS	$c \text{ } cn \text{ } c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Days 9 Nbd 7 Dy 8 Mth
DBF		Dbf
DELE	$n \text{ } cn \text{ } nc$	Dele 1 Long
DESCV	$n \text{ } cn \text{ } t \text{ } nc \text{ } nd \text{ } u$	Descv 1 Long N 7 1 mile(s)
DIC	$n \text{ } cn$	Dic 1 Textline
DIV	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Div 1 Sum1 2 Sum2
FIRST	nl	First 9
FREQ	$c \text{ } cn$	Freq 2 Town
GIF	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Gif 1 Month 2 Long
LAST	nl	Last 5
LEFT	$n \text{ } cn \text{ } [rn]$	Left 4 Ref -1
LENGTH	$n \text{ } cn \text{ } nc$	Length 5 Year 4
MAX	$c \text{ } cn$	Max 1 Width
MEAN	$c \text{ } cn$	Mean 1 Width
MIN	$c \text{ } cn$	Min 1 Width
MUL	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Mul 1 Sum1 2 Sum2
NAME	$n \text{ } cn$	Name 7 Count
NBVAL	$c \text{ } cn$	Nbval 1 Width
NOBS		Nobs
OUTC	fn	Outc test.cal
OUTL	fn	Outl comp.trace
OUTS	fn	Outs f15.out
PLOT	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$ [GIF]	Plot 1 Month 2 Long
PREC	$n \text{ } cn$	Prec 5 Year
RIGHT	$n \text{ } cn \text{ } [rn]$	Right 4 Ref 1
RULER	$[nc]$	Ruler
SAS		Sas
SKIP	nl	Skip 5
STD	$c \text{ } cn$	Std 1 Width
SUB	$c_1 \text{ } cn_1 \text{ } c_2 \text{ } cn_2$	Sub 1 Sum1 2 Sum2
SUM	$c \text{ } cn$	Sum 1 Width
TYPE	$n \text{ } cn \text{ } t$	Type 2 Flower C
UNIT	$c \text{ } cn \text{ } u$	Unit 1 Width cm
VAR	$c \text{ } cn$	Var 1 Width
ZERO	$n \text{ } cn \text{ } t$	Zero 5 Year