SCILAB - Kommandos und Keywords (Auswahl)

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Einführungen

www.fh-htwchur.ch/uploads/media/Arbeiten_mit_Scilab_und_Scicos_v1_01.pdf		deutsch
www.scilab.org/support/documentation/tutorials	Dort: introscilab.pdf	englisch
www.scilab.org/news/events/20100308	Dort: livret_lycees_2010.pdf	französisch

Kommandos und Schlüsselwörter

[...] — matrix	Basics
[...]' — transposed matrix	Basics
, blank ; — matrix element separators	Basics
[1,3.2,6,sin(0.3)] — row vector, elements separated by comma	Basics
[1 3.2 6 sin(0.3)] — same vector, elements separated by blanks	Basics
[1;3.2;6;sin(0.3)] — same vector but transposed (column vector)	Basics
[] — empty matrix (e.g. to delete elements)	Basics
$ — highest index of a matrix	
// — rest of line is treated as comment information	
0:0.25:10 — equally spaced row vector	Basics
%pi, %i, %e, %eps, %t, %f, %inf, %nan — predefined constants	Basics
A, a, ..., Z, z, %, _, #, !, $, ? — variable name elements, case sensitive, type help('names')	Basics
abort — interrupt evaluation.	Scilab
ans — answer	Scilab
argn — Returns the number of input/output arguments in a function call	Scilab
break — keyword to interrupt loops	Scilab
case — keyword used in select	Scilab
clear — kills variables	Scilab
comments — A sequence of two consecutives slashes //	Scilab
do — language keyword for loops	Scilab
else — keyword in if-then-else	Scilab
elseif — keyword in if-then-else	Scilab
errcatch — error trapping, useful for debugging purposes	Scilab
evstr — evaluation of expressions	Scilab
exists — checks variable existence	Scilab

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for — language keyword for loops	Scilab
format — number printing and display format	Scilab
global — Define global variable	Scilab
if then else — conditional execution	Scilab
matrix — reshape a vector or a matrix to a different size matrix	Scilab
mode — select a mode in exec file	Scilab
null — delete an element in a list	Scilab
pause — pause mode, invoke keyboard, extremely useful for debugging purposes.	Scilab
poly — polynomial definition	Scilab
resume — return or resume execution and copy some local variables	Scilab
return — return or resume execution and copy some local variables	Scilab
then — keyword in if-then-else	Scilab
varn — symbolic variable of a polynomial	Scilab
what — list the Scilab primitives	Scilab
while — while keyword	Scilab
who — listing of variables	Scilab
whos — listing of variables in long form	Scilab
integrate — integration of an expression by quadrature	Differential Equations, Integration
intg — definite integral	Differential Equations, Integration
ode — ordinary differential equation solver	Differential Equations, Integration
abs — absolute value, magnitude	Elementary Functions
acos — element wise cosine inverse	Elementary Functions
acosh — hyperbolic cosine inverse	Elementary Functions
acot — computes the element-wise inverse cotangeant of the argument.	Elementary Functions
acoth — element wise hyperbolic cotangeant inverse.	Elementary Functions
& — logical and operator	Elementary Functions
asin — sine inverse	Elementary Functions
asinh — hyperbolic sine inverse	Elementary Functions
atan — 2-quadrant and 4-quadrant inverse tangent	Elementary Functions
atanh — hyperbolic tangent inverse	Elementary Functions
binomial — binomial distribution probabilities	Elementary Functions

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bin2dec — integer corresponding to a binary form	Elementary Functions
cat — concatenate several arrays	Elementary Functions
ceil — rounding up	Elementary Functions
char — char function	Elementary Functions
conj — conjugate	Elementary Functions
cos — cosine function	Elementary Functions
cosh — hyperbolic cosine	Elementary Functions
cotg — cotangent	Elementary Functions
coth — hyperbolic cotangent	Elementary Functions
cumprod — cumulative product	Elementary Functions
cumsum — cumulative sum	Elementary Functions
dec2bin — binary representation of decimal integer	Elementary Functions
dec2hex — hexadecimal representation of decimal integer	Elementary Functions
dec2oct — octal representation of integers	Elementary Functions
diag — diagonal including or extracting	Elementary Functions
diff — Difference and discrete derivative	Elementary Functions
eval — evaluation of a matrix of strings	Elementary Functions
exp — element-wise exponential	Elementary Functions
eye — identity matrix	Elementary Functions
factor — factor function	Elementary Functions
fix — rounding towards zero	Elementary Functions
floor — rounding down	Elementary Functions
gsort — sorting by quick sort agorithm	Elementary Functions
hex2dec — conversion from hexadecimal representation to integers	Elementary Functions
imag — imaginary part	Elementary Functions
int — integer part	Elementary Functions
intersect — returns the vector of common values of two vectors	Elementary Functions
isdef — checks variable existence	Elementary Functions
isempty — check if a variable is an empty matrix or an empty list	Elementary Functions
isinf — check for infinite entries	Elementary Functions
isnan — check for "Not a Number" entries	Elementary Functions
isreal — check if a variable as real or complex entries	Elementary Functions
linspace — linearly spaced row vector	Elementary Functions

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logspace — logarithmically spaced vector	Elementary Functions
log — natural logarithm	Elementary Functions
log10 — logarithm	Elementary Functions
log2 — base 2 logarithm	Elementary Functions
max — maximum	Elementary Functions
meshgrid — create matrices or 3-D arrays	Elementary Functions
min — minimum	Elementary Functions
modulo — symetric arithmetic remainder modulo m	Elementary Functions
pmodulo — positive arithmetic remainder modulo m	Elementary Functions
ndgrid — arrays for multidimensional function evaluation on grid	Elementary Functions
norm — matrix norms	Elementary Functions
ones — matrix made of ones	Elementary Functions
or — logical or of the elements of an array, see also |	Elementary Functions
| — logical or operator	Elementary Functions
perms — all permutations of vector components	Elementary Functions
prod — product	Elementary Functions
rand — random number generator	Elementary Functions
real — real part	Elementary Functions
resize_matrix — create a new matrix with a different size	Elementary Functions
round — rounding	Elementary Functions
sign — sign function	Elementary Functions
sin — sine function	Elementary Functions
sinh — hyperbolic sine	Elementary Functions
size — size of objects	Elementary Functions
solve — symbolic linear system solver	Elementary Functions
sum — sum (row sum, column sum) of vector/matrix entries	Elementary Functions
tan — tangent	Elementary Functions
tanh — hyperbolic tangent	Elementary Functions
typeof — object type	Elementary Functions
zeros — matrix made of zeros	Elementary Functions
deff — on-line definition of function	Functions
exec — script file execution, incl. modes für demo & debugging	Functions

SCILAB - Kommandos und Keywords (Auswahl)

execstr — execute Scilab code in strings	Functions
function — opens a function definition	Functions
varargin — variable numbers of arguments in an input argument list	Functions
varargout — variable numbers of arguments in an output argument list	Functions
nargin — number of arguments in an input argument list	Functions
chdir — changes Scilab current directory	Files : Input/Output functions
find — find indices of boolean vector or matrix true elements	Boolean
bool2s — convert boolean matrix to a zero one matrix.	Boolean
axis_properties — description of the axis entity properties	Graphics Library
bar — bar histogram	Graphics Library
captions — draw graph captions	Graphics Library
clf — clear or reset the current graphic figure (window) to default values	Graphics Library
color — returns the color id of a color	Graphics Library
colormap — using colormaps	Graphics Library
contour — level curves on a 3D surface	Graphics Library
contour2d — level curves of a surface on a 2D plot	Graphics Library
delete — delete a graphic entity and its children.	Graphics Library
drawlater — makes axes children invisible.	Graphics Library
drawnow — draw hidden graphics entities.	Graphics Library
figure_properties — description of the graphics figure entity properties	Graphics Library
gca — Return handle of current axes.	Graphics Library
gce — Get current entity handle.	Graphics Library
gcf — Return handle of current graphic window.	Graphics Library
getcolor — opens a dialog to show colors in the current colormap	Graphics Library
graphics_entities — description of the graphics entities data structures	Graphics Library
hist3d — 3D representation of a histogram	Graphics Library
histplot — plot a histogram	Graphics Library
isoview — set scales for isometric plot (do not change the size of the window)	Graphics Library
legend — draw graph legend	Graphics Library
LineSpec — to quickly customize the lines appearance in plot(...)	Graphics Library

SCILAB - Kommandos und Keywords (Auswahl)

param3d — 3D plot of a parametric curve	Graphics Library
plot — 2D plot	Graphics Library
plot2d — 2D plot	Graphics Library
plot3d — 3D plot of a surface	Graphics Library
polarplot — Plot polar coordinates	Graphics Library
polyline_properties — description of the Polyline entity properties	Graphics Library
rotate — rotation of a set of points	Graphics Library
show_pixmap — send the pixmap buffer to the screen (animation)	Graphics Library
subplot — divide a graphics window into a matrix of sub-windows	Graphics Library
surf — 3D surface plot	Graphics Library
title — display a title on a graphic window	Graphics Library
xarrows — draw a set of arrows	Graphics Library
xdel — delete a graphics window	Graphics Library
xgrid — add a grid on a 2D plot	Graphics Library
xrect — draw a rectangle	Graphics Library
xstring — draw strings	Graphics Library
xtitle — add titles on a graphics window	Graphics Library
list — Scilab object and list function definition	Data Structures
struct — create a struct	Data Structures
clc — Clear Command Window	Shell
lines — rows and columns used for display	Shell
completion — returns words that start with the text you pass as parameter.	Completion
interp — cubic spline evaluation function	Interpolation
interp1 — one_dimension interpolation function	Interpolation
splin — cubic spline interpolation	Interpolation
halt — stop execution	Input/Output functions
input — prompt for user input	Input/Output functions
load — Load a saved variable or a serie of variables	Input/Output functions

SCILAB - Kommandos und Keywords (Auswahl)

save — Save a variable or a serie of variables in a binary file	Input/Output functions
getcolor — opens a dialog to show colors in the current colormap	Input/Output functions
disp — displays variables	Output functions
printf — Emulator of C language printf function	Output functions
det — determinant	Linear algebra
expm — square matrix exponential	Linear algebra
inv — matrix inverse	Linear algebra
linsolve — linear equation solver	Linear algebra
lsq — linear least square problems.	Linear algebra
pinv — pseudoinverse	Linear algebra
spec — eigenvalues of matrices and pencils	Linear algebra
fminsearch —Unconstr. min. of given function with the Nelder-Mead algorithm.	Optimisation
optimset — Configures and returns an optimization data structure.	Optimisation
NDcost — generic external for optim computing gradient using finite differences	Optimisation
fsolve — find a zero of a system of n nonlinear functions	Optimisation
leastsq — Solves non-linear least squares problems	Optimisation
optim — non-linear optimization routine	Optimisation
clean — cleans matrices (round to zero small entries)	Polynomials
coeff — coefficients of matrix polynomial	Polynomials
derivat — rational matrix derivative	Polynomials
horner — polynomial/rational evaluation	Polynomials
roots — roots of polynomials	Polynomials
besseli — Modified Bessel functions of the first kind (I sub alpha).	Special functions
beta — beta function	Special functions
erf — The error function.	Special functions
gamma — The gamma function.	Special functions
blanks — Create string of blank characters	Strings

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grep — find matches of a string in a vector of strings	Strings
length — length of object	Strings
part — extraction of strings	Strings
strcat — concatenate character strings	Strings
strcmp — compare character strings	Strings
string — conversion to string	Strings
strsplit — split a string into a vector of strings	Strings
strsplit — split a string into a vector of strings	Time and Date
clock — Return current time as date vector	Time and Date
date — Current date as date string	Time and Date
datenum — Convert to serial date number	Time and Date
datevec — Date components	Time and Date
etime — Elapsed time	Time and Date
getdate — get date and time information	Time and Date
now — Return current date and time	Time and Date
sleep — suspend Scilab	Time and Date
tic — start a stopwatch timer	Time and Date
toc — Read the stopwatch timer	Time and Date
weekday — Return day of week	Time and Date
cdfbin — cumulative distribution function Binomial distribution	Statistics
cdfnor — cumulative distribution function normal distribution	Statistics
cdfpoi — cumulative distribution function poisson distribution	Statistics
cdft — cumulative distribution function Student's T distribution	Statistics
orrel — correlation of two variables	Statistics
covar — covariance of two variables	Statistics
mean — mean (row mean, column mean) of vector/matrix entries	Statistics
median — median (row median, column median,...) of vector/matrix/array entries	Statistics
moment — non central moments of all orders	Statistics
regress — regression coefficients of two variables	Statistics
st_deviation — standard deviation (row or column-wise) of vector/matrix entries	Statistics
variance — variance of the values of a vector or matrix	Statistics

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read_csv — Read comma-separated value file (e.g. Excel file *.xls)	Spreadsheet
apropos — searches keywords in Scilab help	Online help management
completion — returns words that start with the text you pass as parameter.	Online help management
help — on-line help command	Online help management