Appendix 3. Help files for relevant Matlab sub-programs

INPUTDLG Input dialog box.
Answer = inputdlg(Prompt) creates a modal dialog box that returns
user input for multiple prompts in the cell array Answer. Prompt
is a cell array containing the Prompt strings.

Answer = inputdlg(Prompt,Title) specifies the Title for the dialog.

Answer = inputdlg(Prompt,Title,LineNo) specifies the number of lines
for each answer in LineNo. LineNo may be a constant value or a
column vector having one element per Prompt that specifies how many
lines per input. LineNo may also be a matrix where the first
column specifies how many rows for the input field and the second
column specifies how many columns wide the input field should be.

Answer = inputdlg(Prompt,Title,LineNo,DefAns) specifies the default
answer to display for each Prompt. DefAns must contain the same
number of elements as Prompt and must be a cell array.

Answer = inputdlg(Prompt,Title,LineNo,DefAns,AddOpts) specifies whether
the dialog may be resized or not. Acceptable values for AddOpts are
'off' or 'on'. If the dialog can be resized, then the dialog is
not modal.

AddOpts may also be a data structure with fields Resize,
WindowStyle and Interpreter. Resize may be 'on' or 'off'.
WindowStyle may be 'modal' or 'normal' and Interpreter may be
'tex' or 'none'. The interpreter applies to the prompt strings.

Example:
prompt={'Enter the matrix size for x^2:','Enter the colormap name:'};
def={'20','hsv'};
dlgTitle='Input for Peaks function';
lineNo=1;
answer=inputdlg(prompt,dlgTitle,lineNo,def);

or

AddOpts.Resize='on';
AddOpts.WindowStyle='normal';
AddOpts.Interpreter='tex';
answer=inputdlg(prompt,dlgTitle,lineNo,def,AddOpts);

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LINSPACE Linearly spaced vector.
LINSPACE(x1, x2) generates a row vector of 100 linearly
equally spaced points between x1 and x2.

LINSPACE(x1, x2, N) generates N points between x1 and x2.
ZEROS  Zeros array.
    ZEROS(N) is an N-by-N matrix of zeros.
    ZEROS(M,N) or ZEROS([M,N]) is an M-by-N matrix of zeros.
    ZEROS(M,N,P,...) or ZEROS([M N P ...]) is an M-by-N-by-P-by-...
    array of zeros.
    ZEROS(SIZE(A)) is the same size as A and all zeros.

ROUND  Round towards nearest integer.
    ROUND(X) rounds the elements of X to the nearest integers.

LENGTH  Length of vector.
    LENGTH(X) returns the length of vector X. It is equivalent
to MAX(SIZE(X)) for non-empty arrays and 0 for empty ones.

MOD  Modulus (signed remainder after division).
    MOD(x,y) is x - y .* floor(x./y) if y ~= 0. By convention, MOD(x,0) is x.
    The input x and y must be real arrays of the same size, or real scalars.
    The statement "x and y are congruent mod m" means MOD(x,m) == MOD(y,m).
    MOD(x,y) has the same sign as y while REM(x,y) has the same sign as x.
    MOD(x,y) and REM(x,y) are equal if x and y have the same sign, but
differ by y if x and y have different signs.

ABS  Absolute value.
    ABS(X) is the absolute value of the elements of X. When
    X is complex, ABS(X) is the complex modulus (magnitude) of
    the elements of X.

SIZE  Size of matrix.
    D = SIZE(X), for M-by-N matrix X, returns the two-element
    row vector D = [M, N] containing the number of rows and columns
    in the matrix. For N-D arrays, SIZE(X) returns a 1-by-N
    vector of dimension lengths. Trailing singleton dimensions
    are ignored.

    [M,N] = SIZE(X) returns the number of rows and columns in
    separate output variables. [M1,M2,M3,...,MN] = SIZE(X)
    returns the length of the first N dimensions of X.

    M = SIZE(X,DIM) returns the length of the dimension specified
by the scalar DIM. For example, SIZE(X,1) returns the number of rows.