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% Example 1 - Using fixed input variable positioning                        %
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[Out1 Out2] = myFunction(In1,In2,In3,In4,In5) % Call the function like this

function [Out1 Out2] = myFunction(In1,In2,In3,varargin)

switch nargin
    case 3 % This will trip if nothing is put in as varargin
        In4 = ex1;
        In5 = ex2;
    case 5 % Assuming when I want to use the varargin, I would be passing
           % two variables
        In4 = varargin{1};
        In5 = varargin{2};
    otherwise
        disp('Incorrect number of arguments in myFunction')
        return
end

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% Example 2 - Using title of variable followed by variable in inputs       %
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[Out1 Out2] = myFunction2(stateIn1,'Input1',In1,'Variable3',In3,...
    'Input2',In2) % Call the function like this, they don't have to be in
                  % order of for loop below

function[Out1, Out2] = myFunction2(stateIn1,varargin)

% Make sure the right number of inputs are inserted:
if mod(nargin,2) ~= 1  % =0 if even inputs are required
    error('Odd number of inputs required, state, and option-pairs')
end

if nargin > 7
    error('Too many input arguments in myFunction2')
end

% Define default values in case you don't end up passing them in
In1 = 10;
In2 = 1.0;
In3 = 0.1;

% Pull variables out of varargin array
for n = 1:2:(length(varargin) - 1)
    switch varargin{n} % Notice the curvy brackets
        case 'Input1'
            In1 = varargin{n+1}; % pulls value after 'Input1'
        case 'Input2'
            In2 = varargin{n+1}/In1; % Can perform operations in here
        case {'Input3','Variable3'} % Can have multiple names for one
                                    % input variable
            In3 = varargin{n+1};
        otherwise % Include catch for wrong names
            error('Invalid Parameter Name')
    end
end
```