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% shapeIntersection : returns the intersection of any number of shapes,
%                     i.e. max(shapel, shape2, ..., etc)
%
% Output parameters:
%   finalShape = the intersection of shapel with other shapes
%
% Input parameters:
%   shapel = any shape represented by an mxn matrix
%   varargin = any number of shapes (or zero), each represented by an mxn matrix

function finalShape = shapeIntersection(shapel, varargin)

finalShape = shapel;

for i = 1 : size(varargin, 2)
    finalShape = max(finalShape, varargin{i});
end

```