```
 function x = CramersRule(A, b)
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% This function determines Solve the system Ax = b for any matrix
% A using Cramer's Rule.
% Input arguments: vector A and vector b
% Output argument: solution vector x

[m, n] = size(A);

% Modify CramersRule3x3.m and use a for loop to write this new function.
if m ~= n
    disp('Matrix A is not square, so Cramer''s rule cannot be applied.')
elseif abs(det(A)) <= 10^(-8)
  disp('Matrix A is singular, so Cramer''s rule cannot be applied.')
  % If |det(A)| is less than 10^(-8), det(A) = 0 and A is not invertible.
else
    for i = 1:n
        B = A;
        B(:, i) = b;
        x(i) = det(B) / det(A);
    end
    x = x';
end
end
```