```matlab
close all
clear

image1  = imread('gauss.jpg');
image2  = imread('dyoung.jpg');

N = length(image1);

%% Create 5-point finite difference Laplacian on a square
A = delsq(numgrid('S',N+2));

%% Increment the diagonal by diagonalIncremement

diagonalIncremement = 0.5;
A=A+diagonalIncremement*speye(length(A));

%% Create b such that image2 is answer to Ax = b
b = A*cast(reshape(image2,N^2,1),'double');

%% Make image1 our initial guess to Ax = b

x0 = cast(reshape(image1,N^2,1),'double');

%% Visualize initial guess

image(reshape(x0,N,N))
colormap(gray(256))
axis equal off tight
drawnow


%% Set up matrix splitting of A
D = diag(diag(A));
L = -1*tril(A,-1);
U = -1*triu(A,1);

% The iteration matrix for Gauss-Seidel uses the lower triangular matrix of A
% instead of the diagonal.
M = inv(D-L);

%% Prepare diagonal splitting version of Jacobi method


%% Perform Jacobi iteration

x = x0;      % initial guess
e0 = norm(x - cast(reshape(image2,N^2,1),'double'));    % initial error

numIterations = 50;     % number of iterations
for iter = 2:numIterations

  xold = x;            % update previous solution

  x = M * (b + U * x);%M * (b + DSU*x);  % compute current solution

  % print out current error
  eiter = norm(x - cast(reshape(image2,N^2,1),'double'))/e0

  % visualize current solution
  cla
  image(reshape(x,N,N))
  colormap(gray(256))
  axis equal off tight
  pause(.25)
end
```