4. Iterative solutions of LES

1. Write an M-file for Jacobi iteration. The file name be: jacobi
   - Input parameters: The matrix of LES A and a vector for the right-side: $\underline{b}$
   - Output argument: the approximation of the solution vector: $\underline{x}$
   - We can use the vectorial form of the iteration
2. Write an M-file for Gauss-Seidel iteration. The file name be: gaussseid
   - As in previously at Jacobi iteration.
3. Write an M-file for for examinening the parameter of Soothed Jacobi iteration. The file name be: jomega
   - Input parameter: The matrix of LES A
   - Let us draw the graph of the eigenvalues dependes on parameter ω. Sign the spectral radius, and find the optimal parameter and the interval of convergence.
   - As output argument give back the computed results.