CS210: Numerical and Scientific Computing

Assignment 3

(a) Write a subroutine for solving a pentadiagonal matrix whose entries can be complex numbers. Take both non-symmetric and symmetric cases.

(b) Design a problem to solve Ax =b, where A is a pentadiagonal matrix and use your subroutine to solve this systems.

(c) Compare the performance of your subroutine with the Sun Performance Library routine for pentadiagonal matrix for a big size matrix.

(d) Solve the designed Ax = b using MATLAB.

(e) Provide a READEME file to describe your solution algorithms and work.

Submission Deadline – 12:00 Noon of February 3, 2004

Policy – No Marks for late submissions.