AM 5450

Assignment 4

1. In the previous assignment the stresses in a plate with a hole was solved for three loading configurations:
   a. Under uniaxial tension
   b. Under biaxial tension
   c. Under tension in one direction and compression in another direction.

Write a code to analyse the three problems in-line with the previous assignment, using isoparametric triangular elements and 8-noded isoparametric quadratic elements.

Note:

   i. No need to find the stresses. Just find the nodal displacements and write the expression to find the strains and the stresses.
   j. Use gauss quadrature for finding the elemental K matrices.
   k. The node and the element connectivity information for the 8-node biquadratic plane stress can be obtained from the attached ABAQUS .inp file.