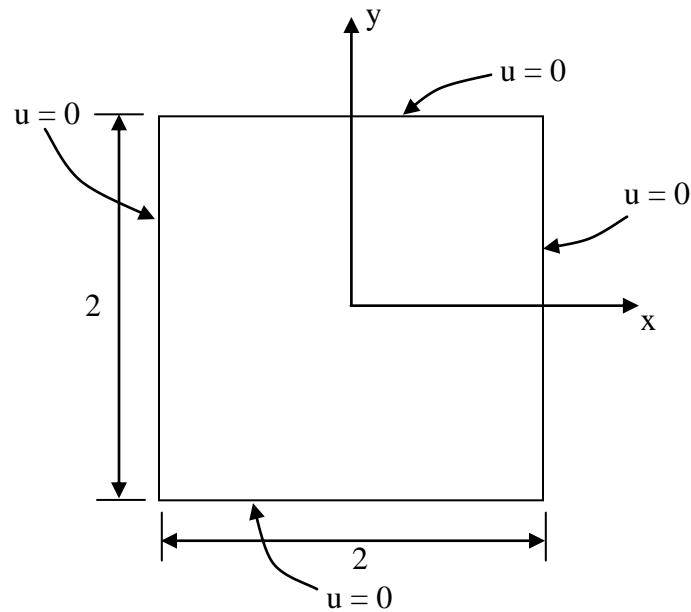


HOMEWORK SET # 7
ME/AE 5212 Introduction to Finite Element Analysis

Solve the Poisson equation using **fem2d**

$$-\left(\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2}\right) = 1 \text{ in } \Omega, \quad u = 0 \text{ on } \Gamma$$



Consider biaxial symmetry and use a mesh of 8 triangular elements and 4 rectangular elements in the quarter model (see Example 13.4.1 for the input data). Also, present the results using 32 triangular elements and 16 rectangular elements in the quarter model. Compare the results with the hand calculation solution given in Table 8.3.1. Need a comparison summary and the summary should follow the problem statement. (20 points)