

عنوان مقاله:

Analysis of structures with two force members using MATLAB software

محل انتشار:

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خلاصه مقاله:

In this paper the linear static response of a two dimensional truss is studied using finite element method. For his purpose a code is conducted using MATLAB software that can analyze any truss with different geometries, loadings or boundary conditions, and presents the value of forces, support reactions and displacements. The advantages of this software are its high speed in problem analysis and easy application. First the importance of finite element method and its application in approximate solution of physics and engineering problems are considered, then the codes for this problem are written step by step and the challenges of each stage are described. Finally the problem is solved using the written code and the value of stiffness matrix, force vectors and displacement vectors are obtained and the results are analyzed

کلمات کلیدی:

Truss, Finite element method, FEM, Stiffness matrix, MATLAB

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