Guhan Sundar

A11889992

MAE 150

HW#3

**Problem 2**

Some advantages of Finite Element Analysis are that it can handle very complex geometry, complex constraints, complex loading, and can be used in a multitude of applications. Some disadvantages of FEA are that they are only approximate solutions, and that the analysis is not intelligent on its own and requires no user error.

Packages for FEA:

* FEBio – finite element analysis used for biomechanics. It is specifically focused on solving nonlinear large deformation problems in biosolid mechanics.
* COMSOL – cross platform finite element analysis, solver, and simulation software. Allows for conventional physics-based systems with PDEs
* VisualFEA – finite element software for structural, geotechnical, heat transfer and seepage analysis
* JCMsuite – Finite element software to analyze electromagnetic waves, elasticity, and heat conduction