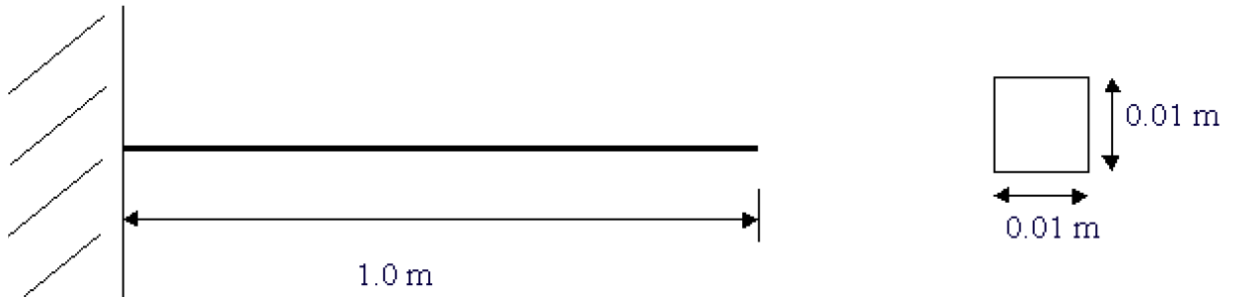


1. A beam is made of steel of length 1m and cross sectional area $10\text{cm} \times 10\text{cm}$. Do the modal analysis of the cantilever, view the different modes shape and obtain mode frequencies. $E = 206.8\text{ GPa}$, density 7830 kg/m^3 and Poisson's ratio = 0.3



2. A harmonic load is applied at the end of the above beam. The frequency of the applied load is 1-100 Hz. Do the harmonic analysis and plot graph between deformation in y direction and frequency. All material properties are same as of question 1.
3. An impact load of 100 N is applied for 0.01 second at the end of same beam. View the response at the location of impact by doing transient analysis. Plot graph between U_y and frequency. All material properties are same as of question 1.