

Steps to run the code-

First, make sure that Numpy library is installed in the computer

1.) Run the code

2.) Enter the number of nodes in the truss

3.) Input the x and y coordinates of the nodes one by one starting from the x coordinate of first node to y coordinate of the last node

The coordinate matrix will appear on pressing enter after the last input

4.) Input the x and y external load forces on the nodes one by one starting from the x component of load at first node to y component of load at the last node

The external loads matrix will appear on pressing enter after the last input

5.) Input the x and y constraints at the nodes one by one starting from the x constraint of first node to y constraint of the last node

The constraints matrix will appear on pressing enter after the last input

6.) Input the value of adjacency between the two nodes (1 if i th and j th nodes are connected and 0 if i th and j th nodes are not connected)

The adjacency matrix will appear on pressing enter after the last input

7.) Press Enter after inputting the last input value for the adjacency matrix

8.) Output appears. It contains values of all member forces and unknown support reactions. Note that 1,2,3,5.. correspond to A,B,C,D,E.. in the truss diagram