This final project objective here is to study mode activation – use cantilever beam from Project 1. The techniques utilized in the previous projects will be used in order to study how different modes might be activated due to different initial conditions.

**PART A - Activation of One Mode due to a Three Load Points**

Using a maximum of 3 degrees of freedom for the application of a load, construct an initial displacement that will activate primarily the first mode of the beam system.

Using a maximum of 3 degrees of freedom for the application of a load, construct an initial displacement that will activate primarily the second mode of the beam system.

**PART B - Activation of Modes 1 and 3**

Using no more than 4 adof, construct an initial displacement that will activate primarily mode 2 and 3 of the beam system. There should be almost no activation of any other modes of the system. (Note: it's not impossible)

In all parts studied above, your selection of degrees of freedom for activation of the system must be justified. Combine your knowledge of model reduction, model expansion, solution of sets of equations, modal participation factors and any other appropriate tools to solve the problem.

*This data is to be presented in a report format as well as orally presented sometime during December.*