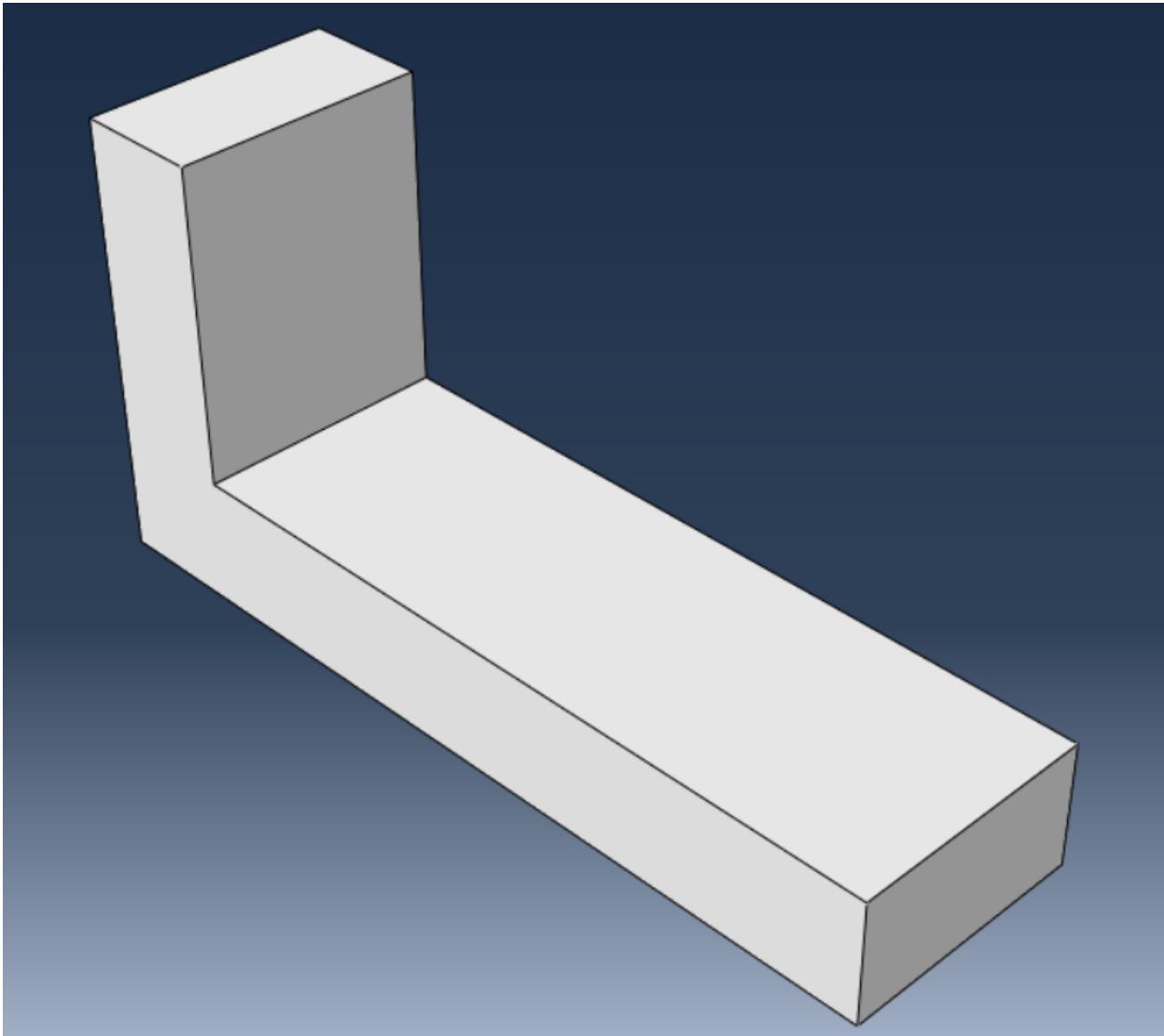


Project 9: ABAQUS Sub-model with finer mesh

Problem Statement: Use sub-modeling approach to drive a local model with finer mesh in a static structural simulation.

Geometry:

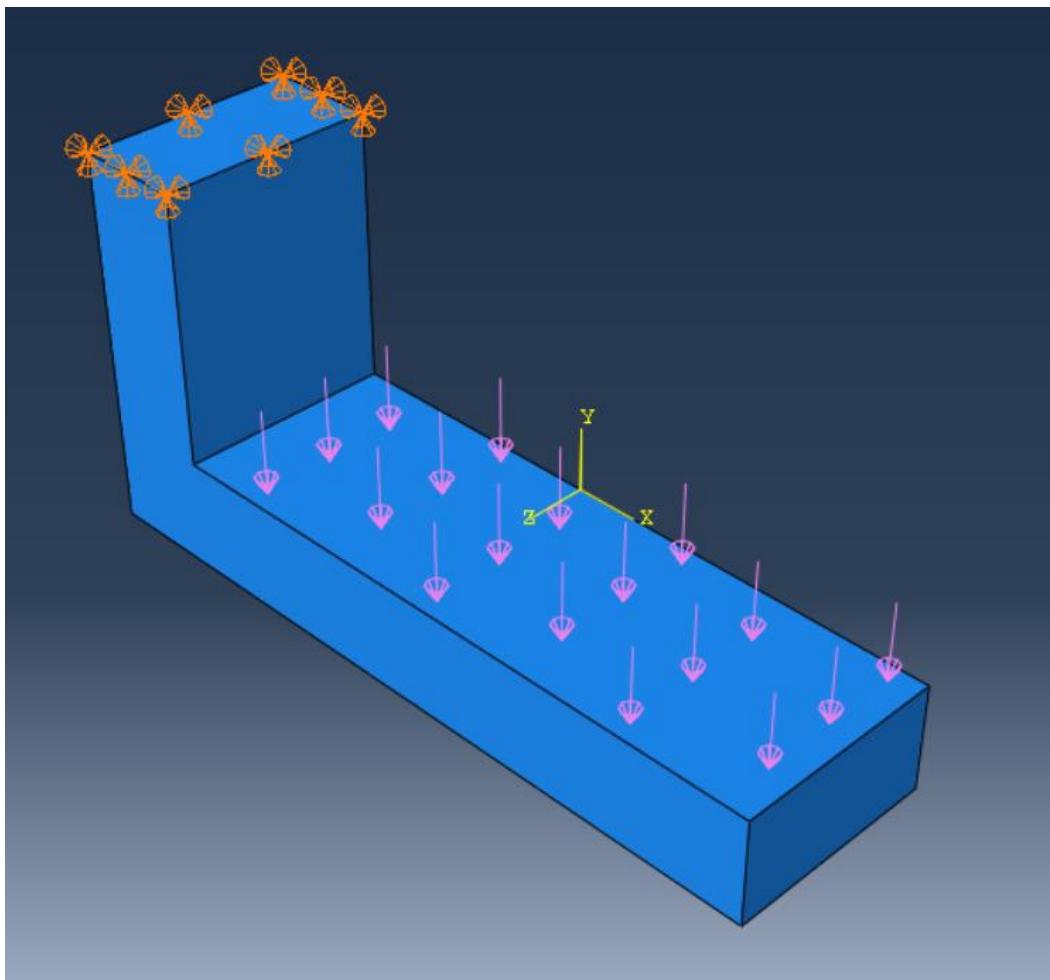


Material Properties:

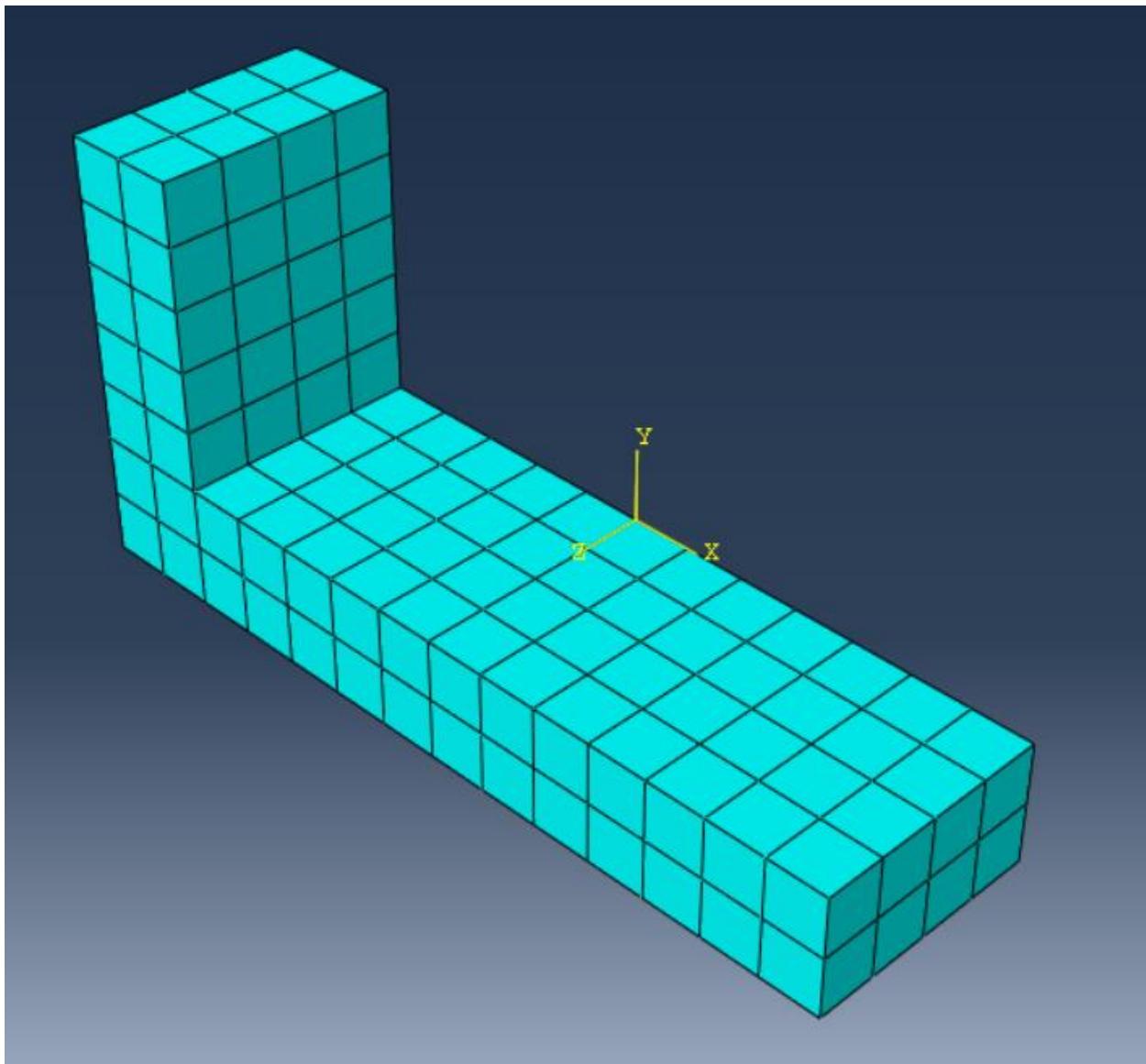
Young's Modulus	Poisson's Ratio
200000	0.3

Loading and boundary conditions:

- 1) Top surface in the left region is fixed. Top surface in the right region has a pressure load applied.

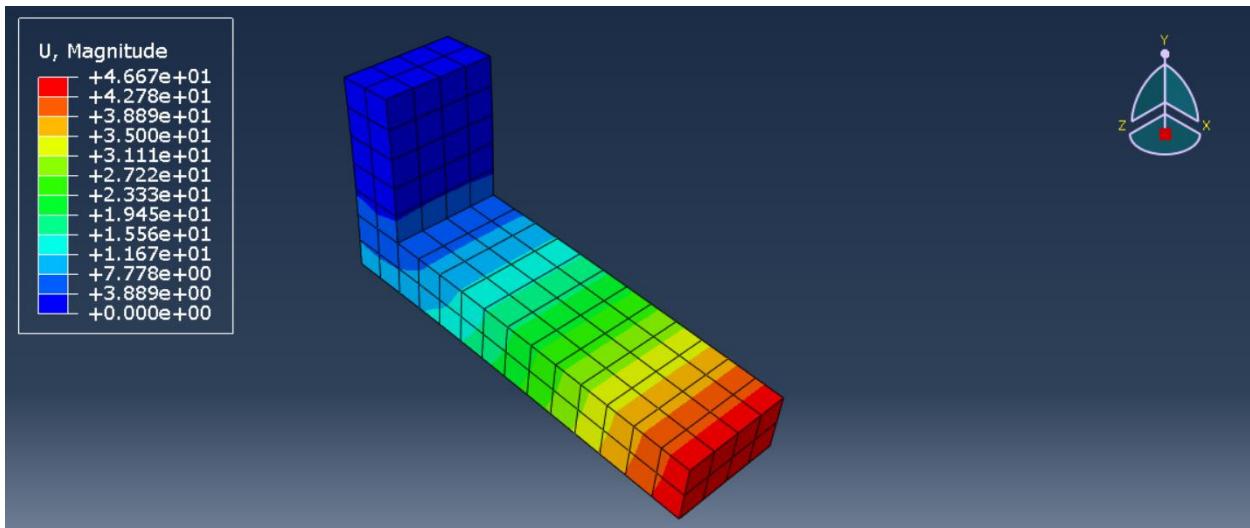


Mesh: (coarse due to limitation of 1000 nodes in ABAQUS educational version).

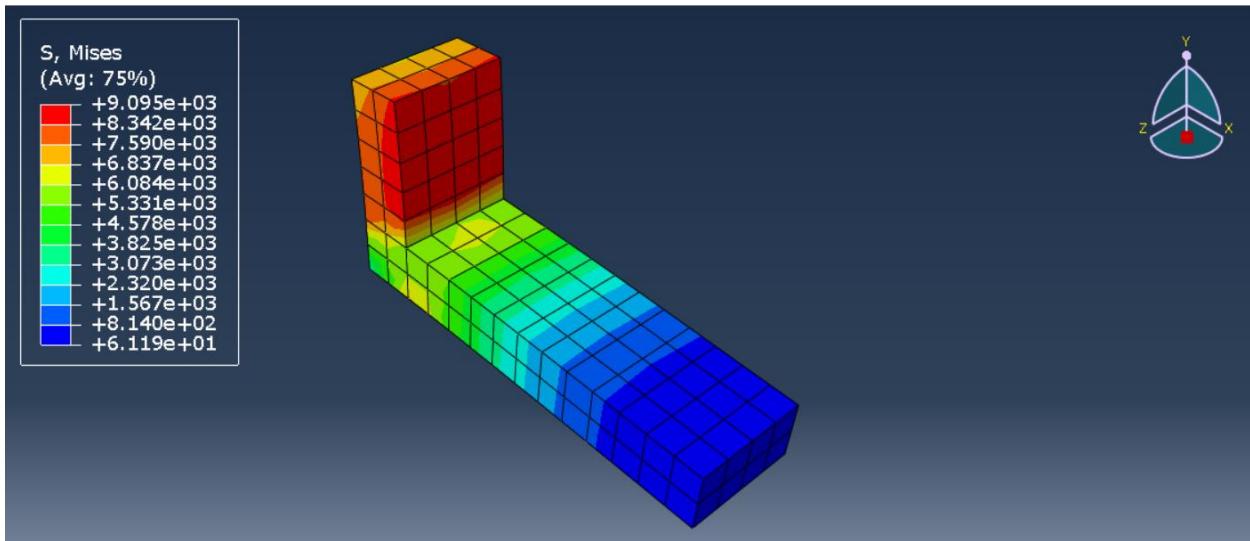


Results:

Deformation:

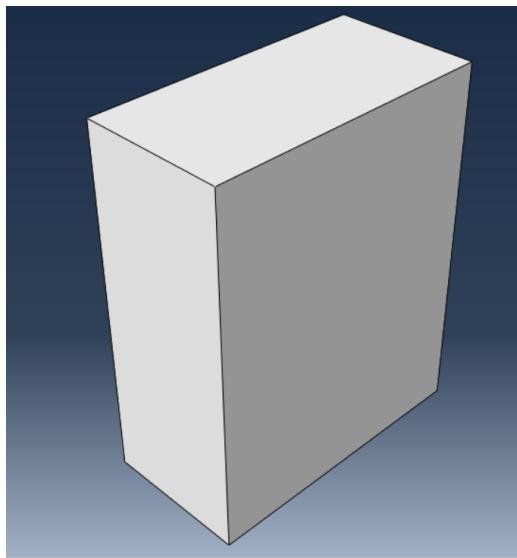


Mises stress:



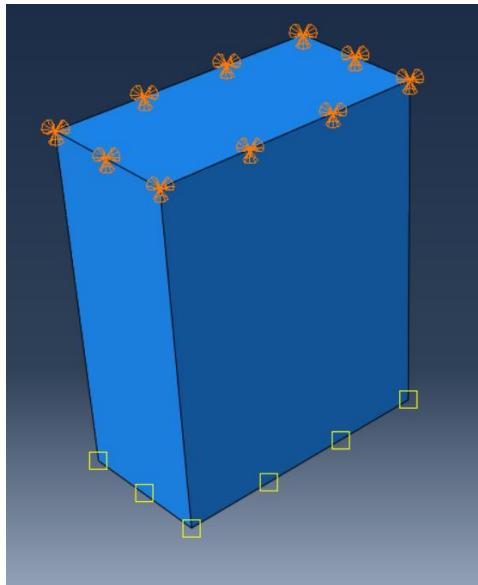
Sub-model (Left Region of the global model):

Geometry:



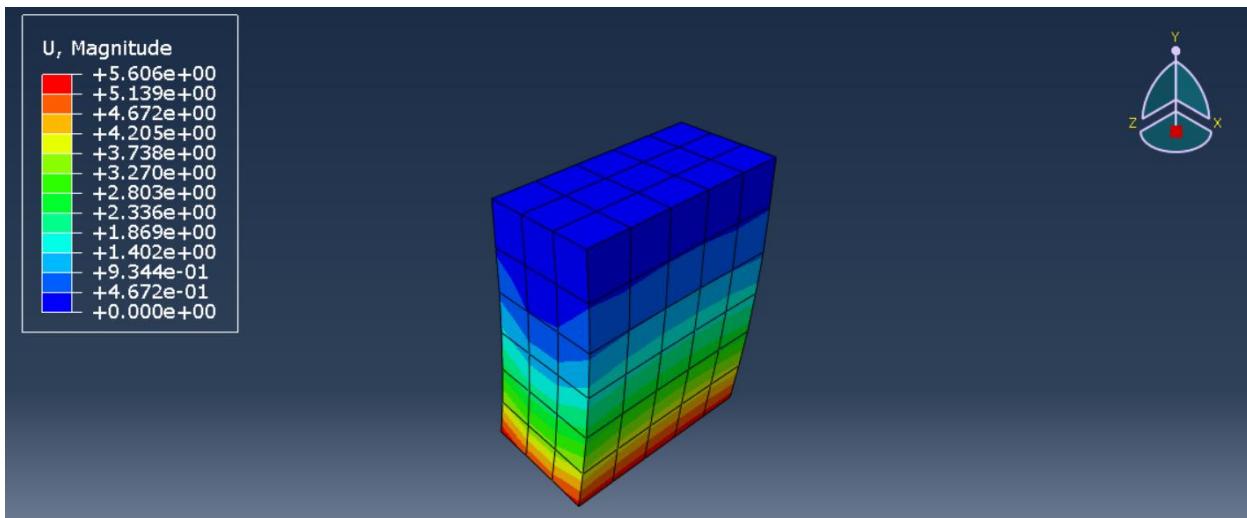
Loading and BC:

1. Sub-modeling BC applied at the bottom surface.



Results:

Deformation:



Mises stress:

