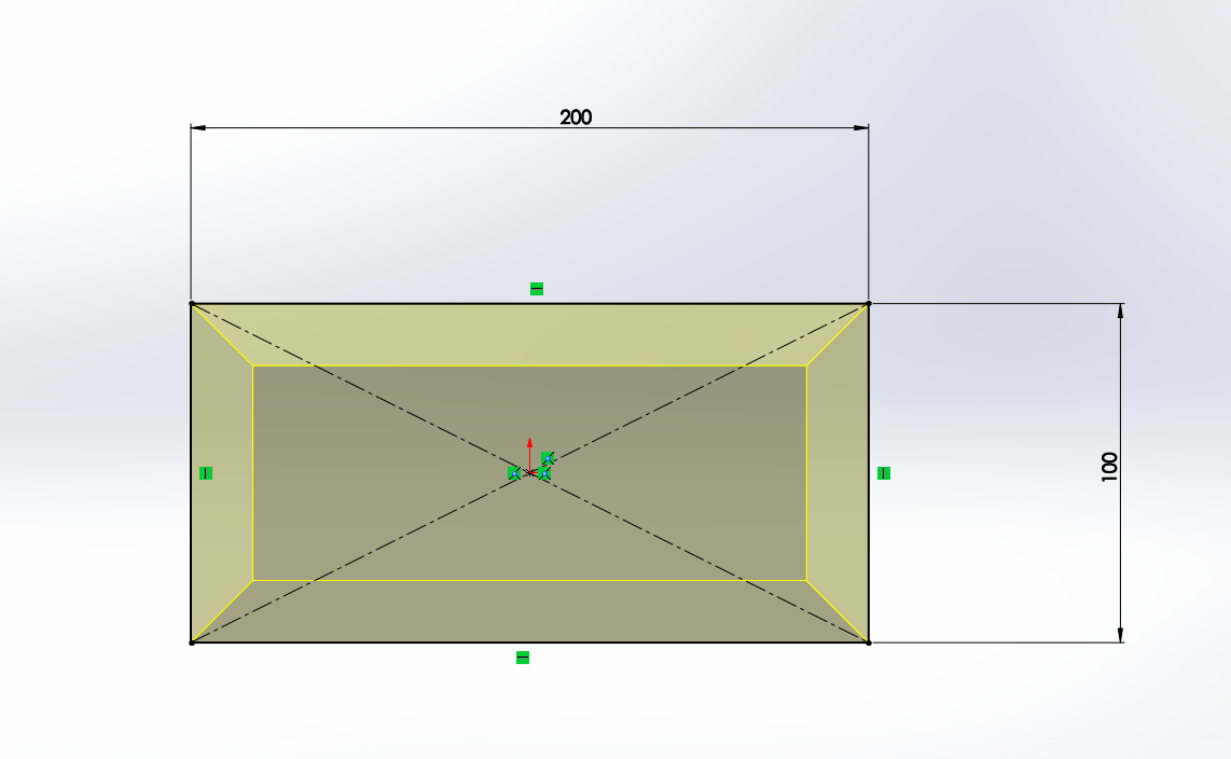
ITP 308: Lab 8 – Simulation Xpress

Setup

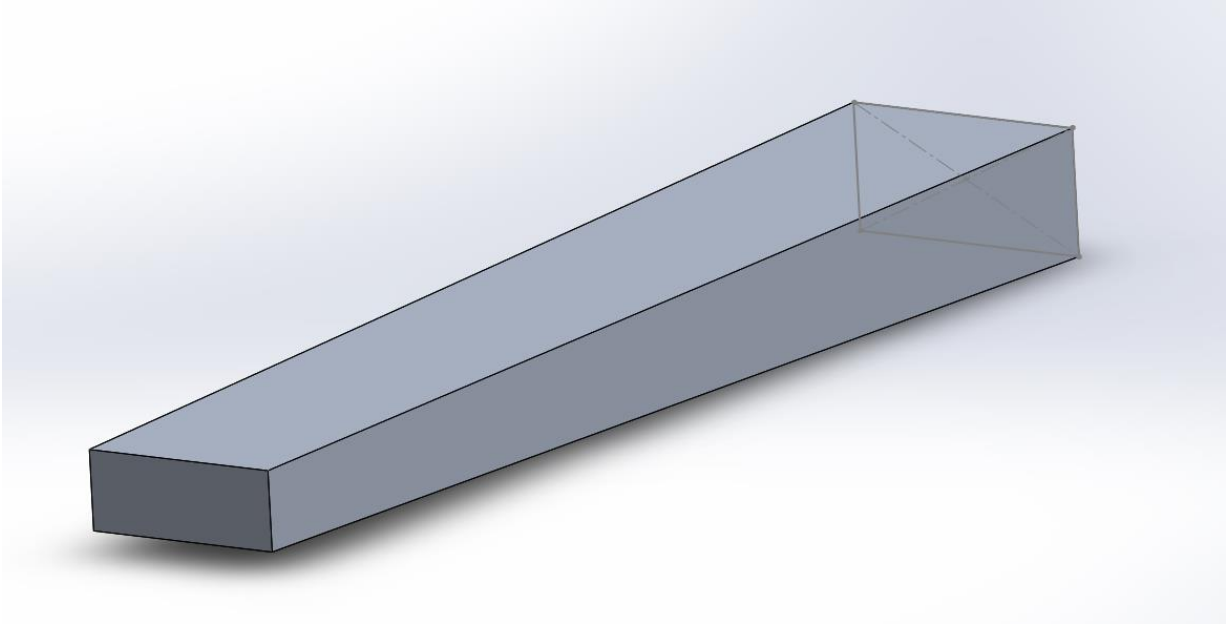
In this lab, we will run a two simulations to determine the stresses and displacement of a simple beam under a specified load.

Beam Creation

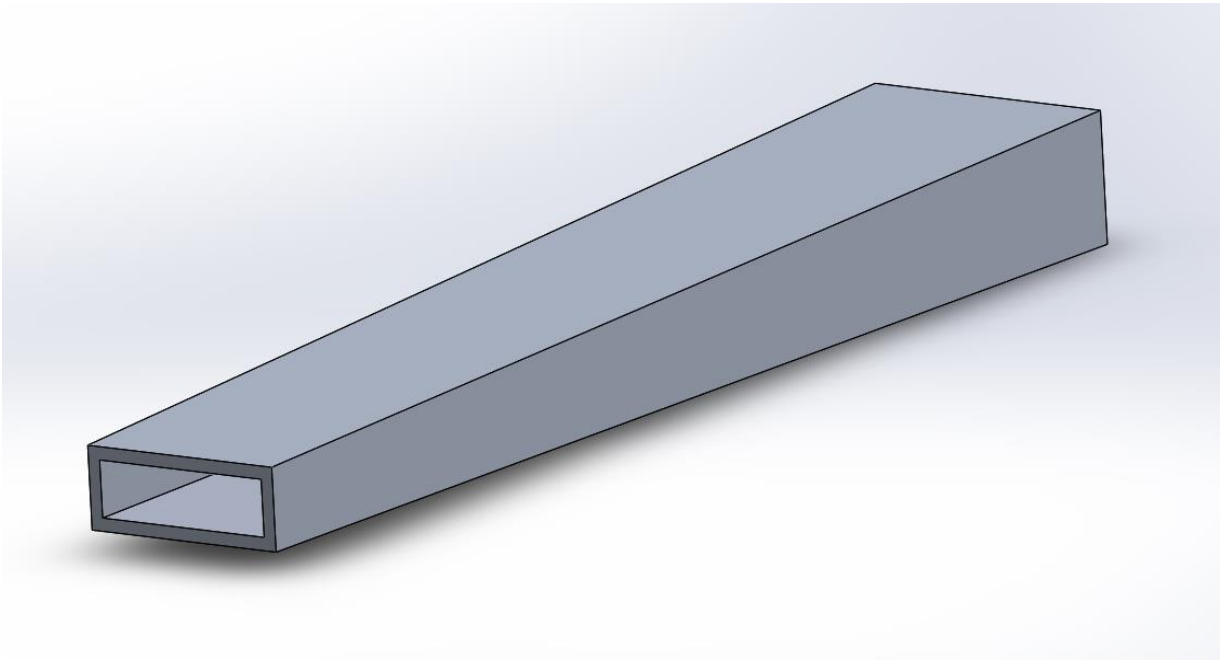
We will create two beams: A solid beam, and a hollow beam. Both beams have sketches that look like this (dimensions in mm):



When you extrude the beam, extrude to a length of 1050.00 mm, with a draft of 1 degree. Your finished beams should look like the following:



Your first beam should be the above picture, the second beam, should be a similar beam but it has been shelled, with both ends open with a thickness of 10.00mm, like the following:



Start the Simulation and apply a fixture at the wide end of the beam, and a force of 1000N on the top surface of the beam, normal to the surface. The material will be 1060 Alloy (Aluminum). Run the simulation for both beams and look at the Von Mises Stresses, and the Displacement. When you are done, save both files as:

***username*_solidbeam.sldprt** and ***username*_hollowbeam.sldprt**

Place both parts in a compressed folder and rename ***username*_lab8.zip**

Submit the file through Blackboard.

Rubric:

Item	Points
All parts have materials	2
All parts have fully defined sketches	2
Analysis is done on both parts	8
Total	12