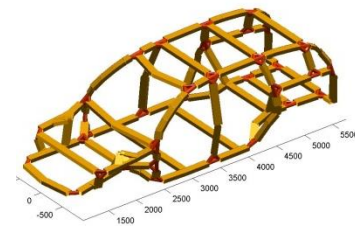


Main Assignment (Auto1026 & MIET2491)

“Design & Analyse a FEM Car Body Model Using Beam Elements”

- Car type: Passenger car (Sedan, SUV). Please choose the car name that you want to analyse and **email me** (mohammad.fard@rmit.edu.au) by **September 1st (Friday)**.
- Analyses: NVH (SOL103 & SOL111).
- A PDF **report** (<15 A4-pages, PDF) & a **PPT presentation** (~10 slides) must be submitted via RMIT Learning Hub.
- You will give an oral PPT presentation of your CAE model and the results along with the report.
- Report & PPT Presentation deadline: **October 6th (Friday)**.

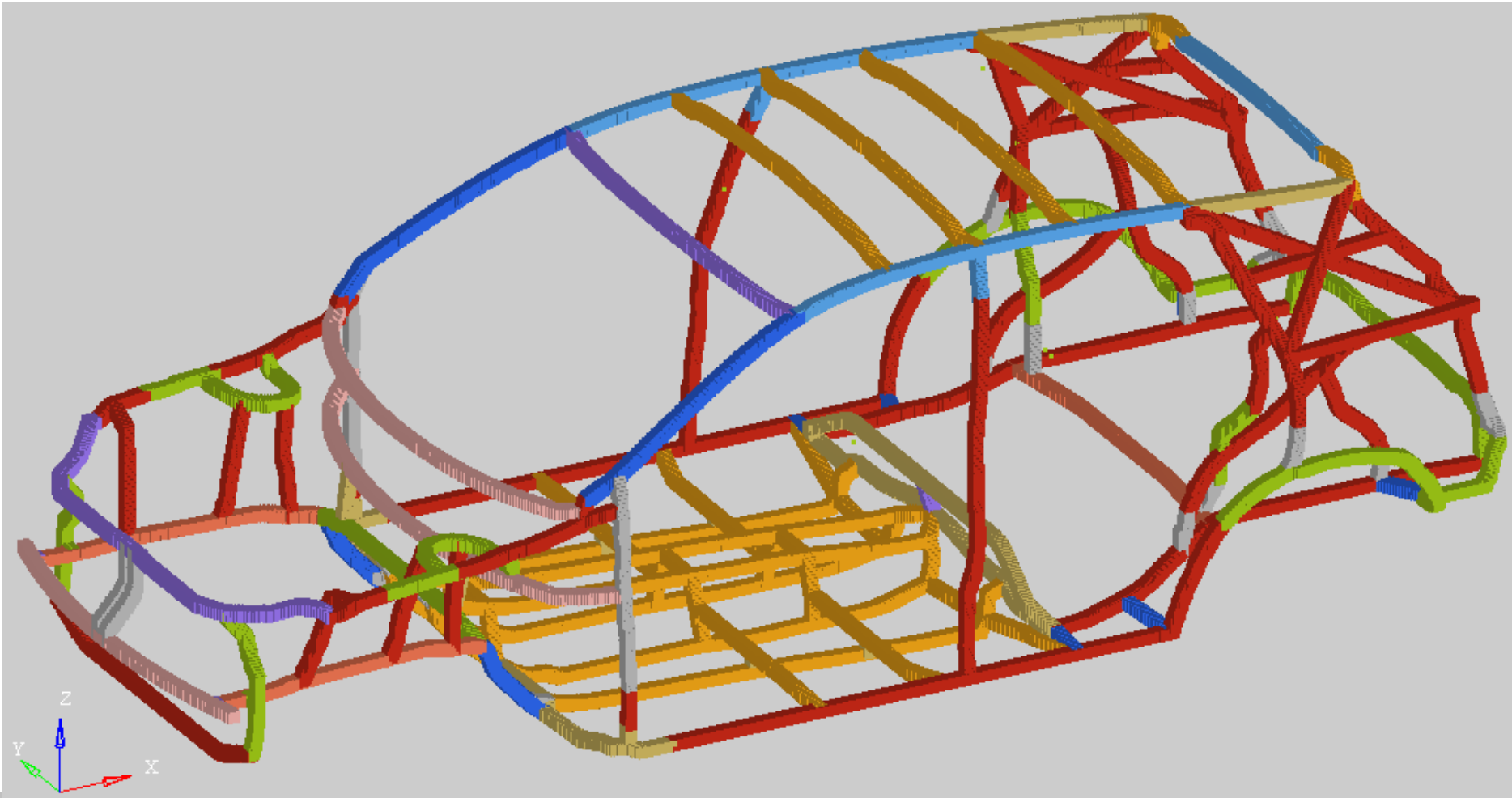


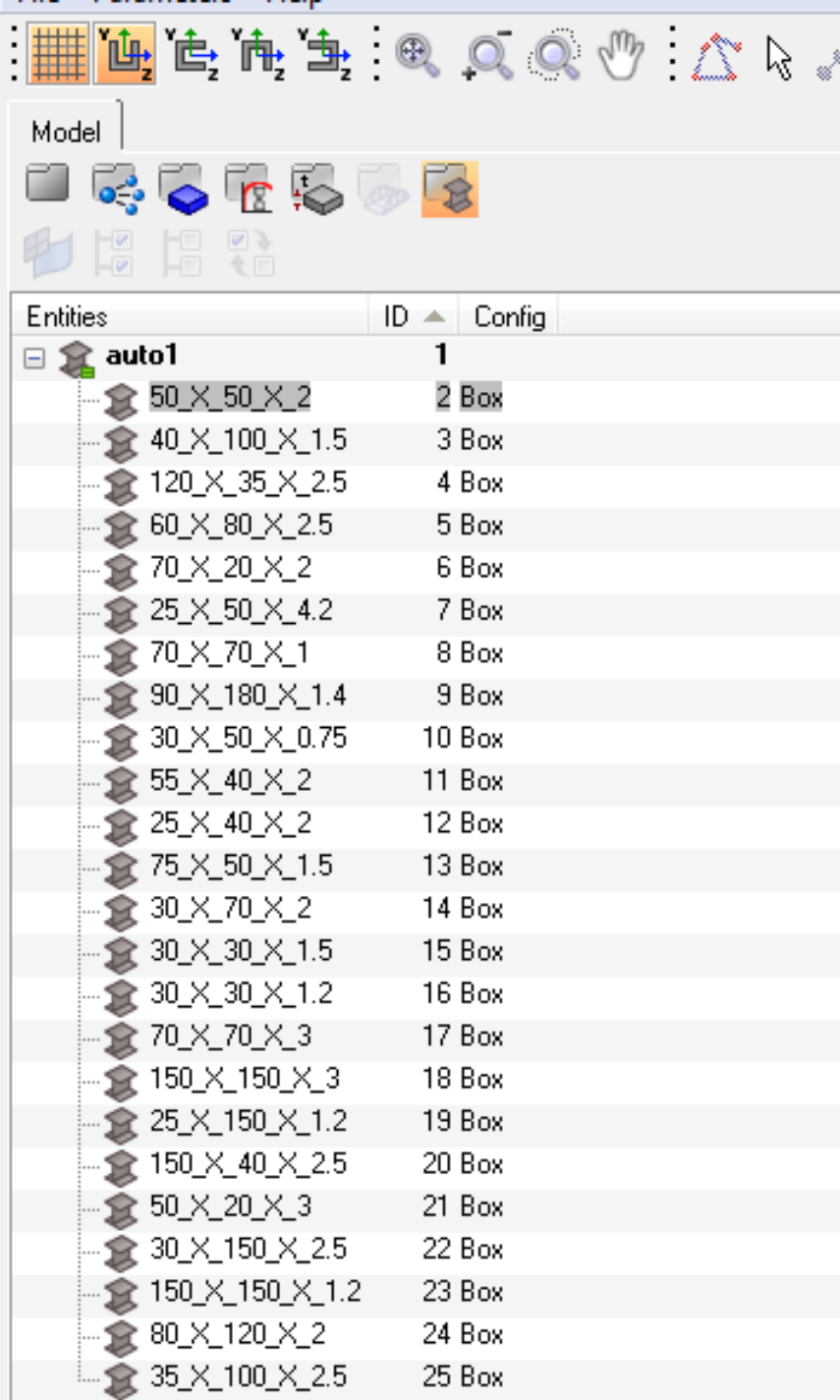
Note: You need to search internet to find the estimated dimension of the car that you are willing to use it for your main Assignment. See also the sample projects in the Week-01 lecture notes in Learning Hub.

The following slides are an example of the main assignment is shown in the next slides.

You can see the example model and given information to get a good idea for your own project.

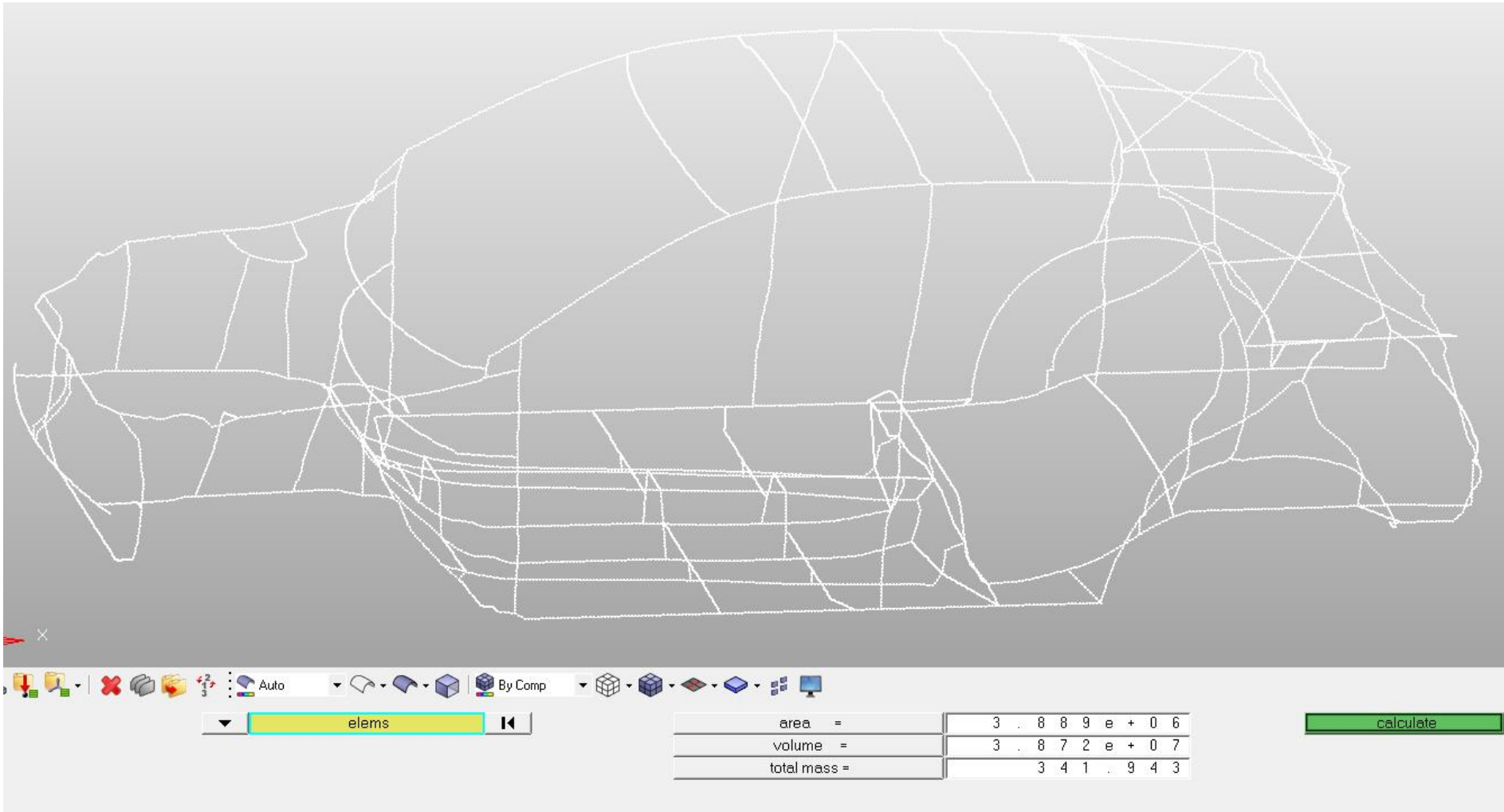
A Concept Model for a Compact SUV Car (Example for your Main Assignment)



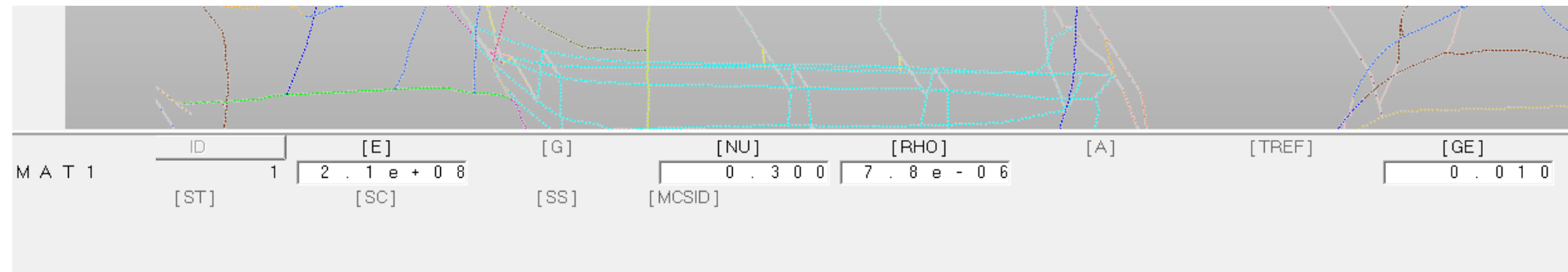


Beam Cross/Sections for this car.
 You may use different
 cross/sections for your own car.

Total Mass for this Car (Example)



Material Property (Steel)



Beam Section Orientation

1D --> Line Mesh
 Select the Line --> Choose Vector.
 For selecting N1, N2, N3, and B (Base)
 points.
 Please see the attached photo. The B
 point should be same as N1 (or N2 or
 N3) points.

