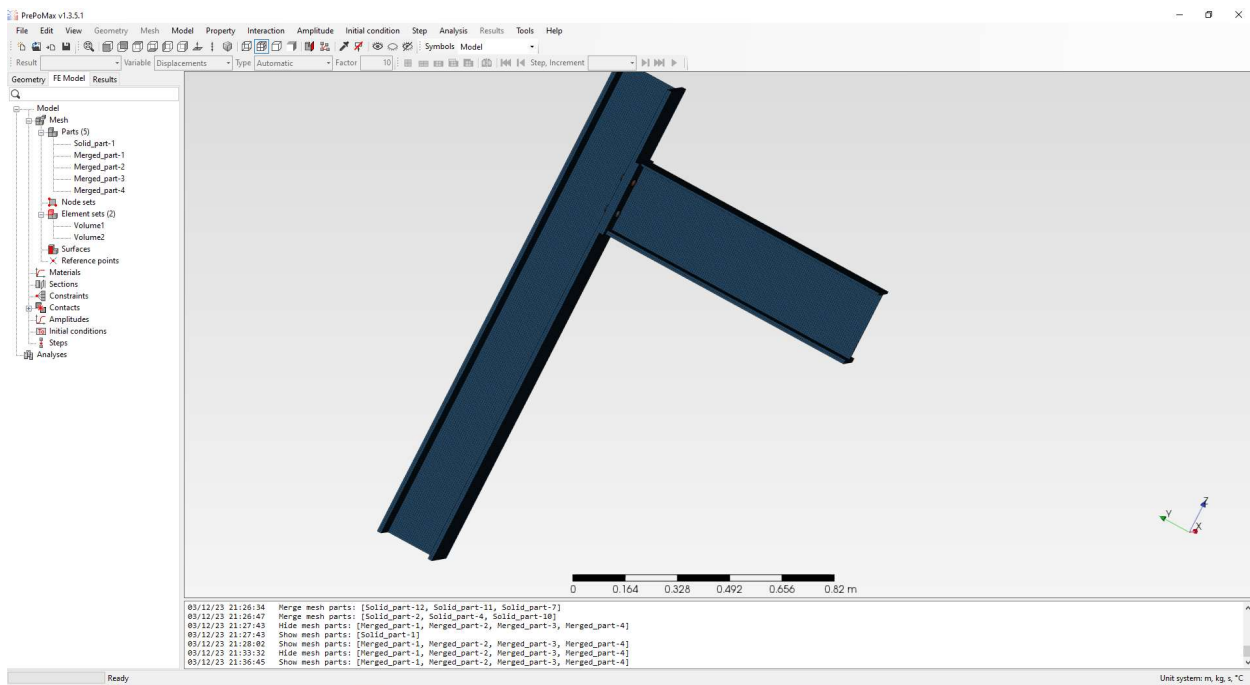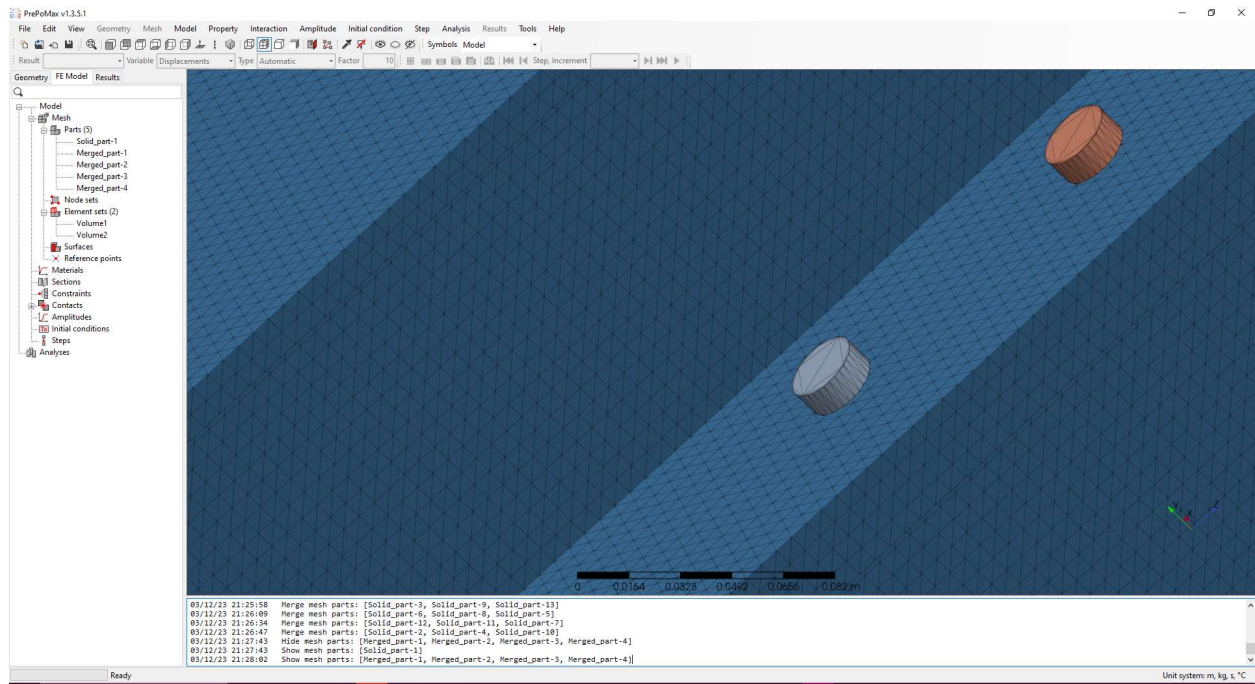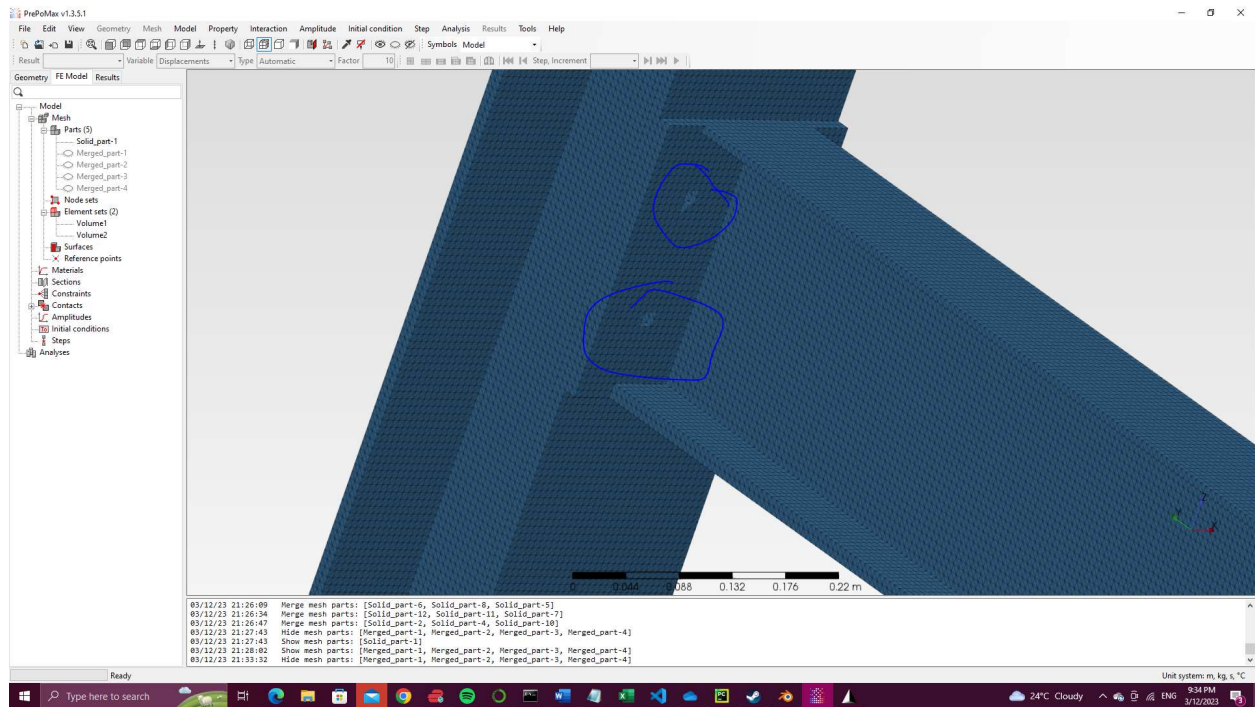Cross section to scale, not the length of the member...
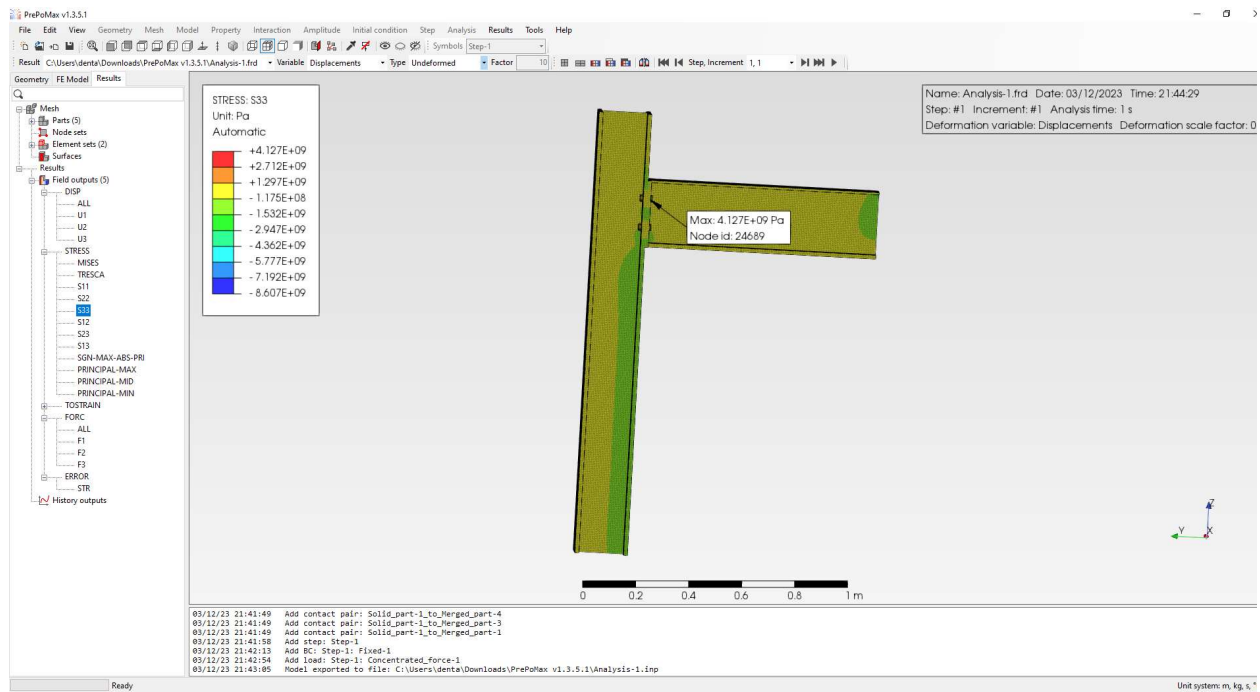
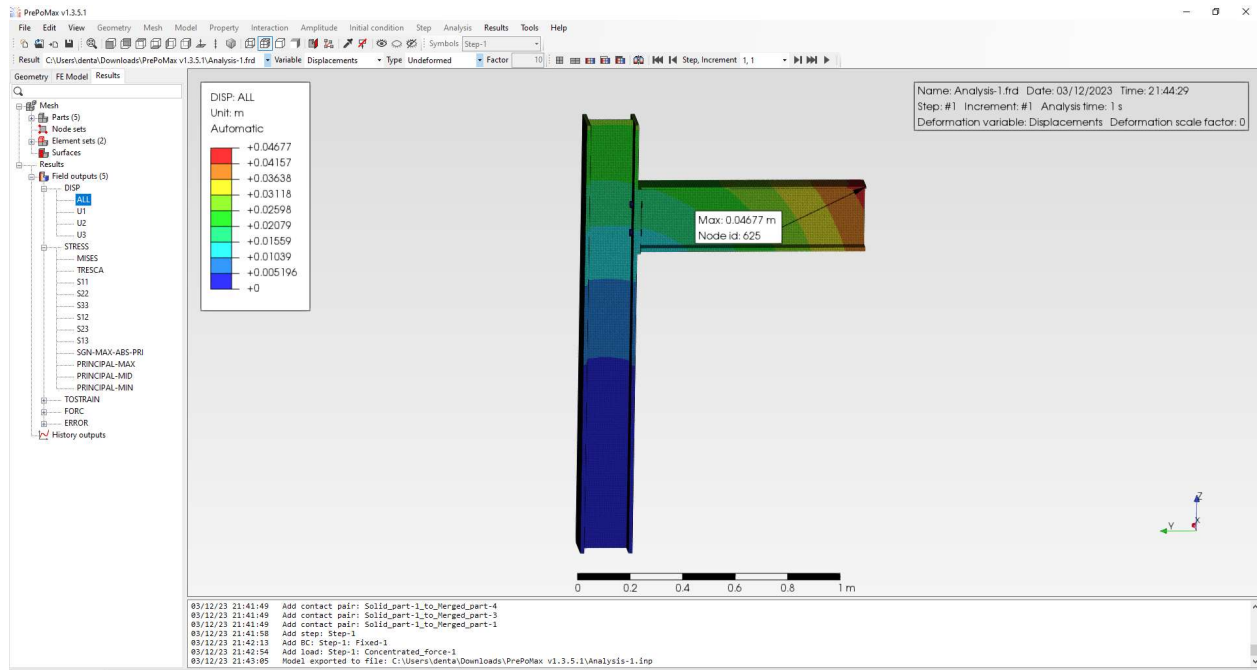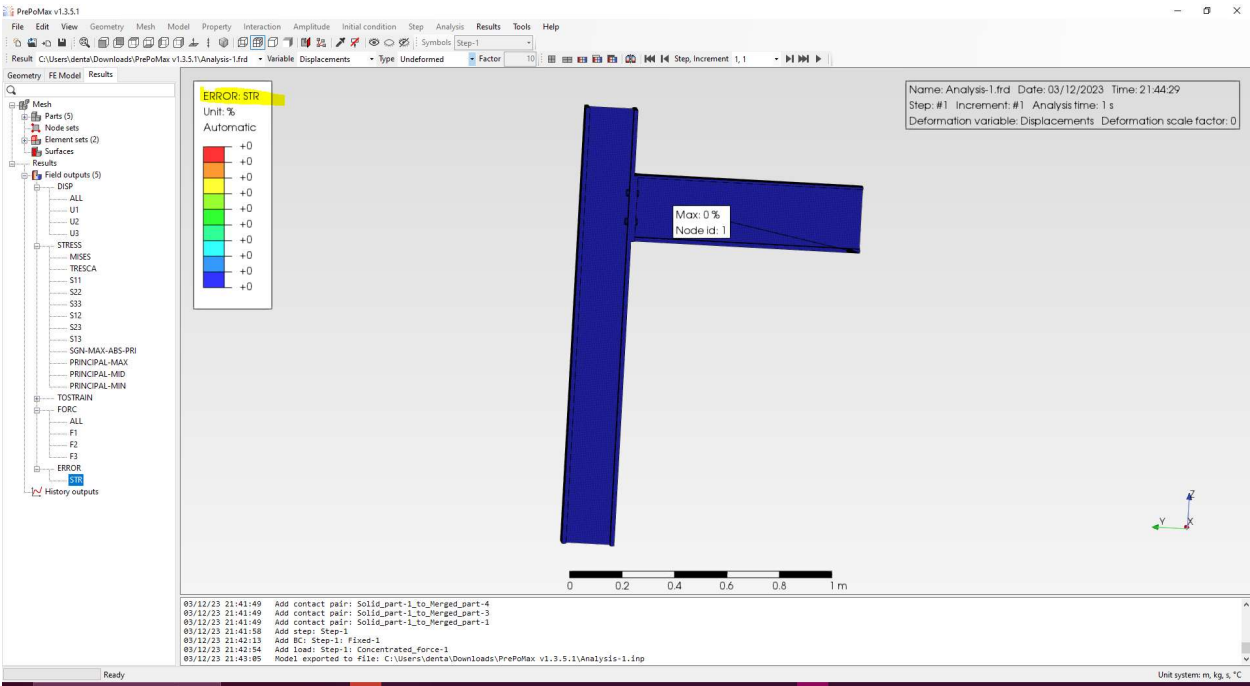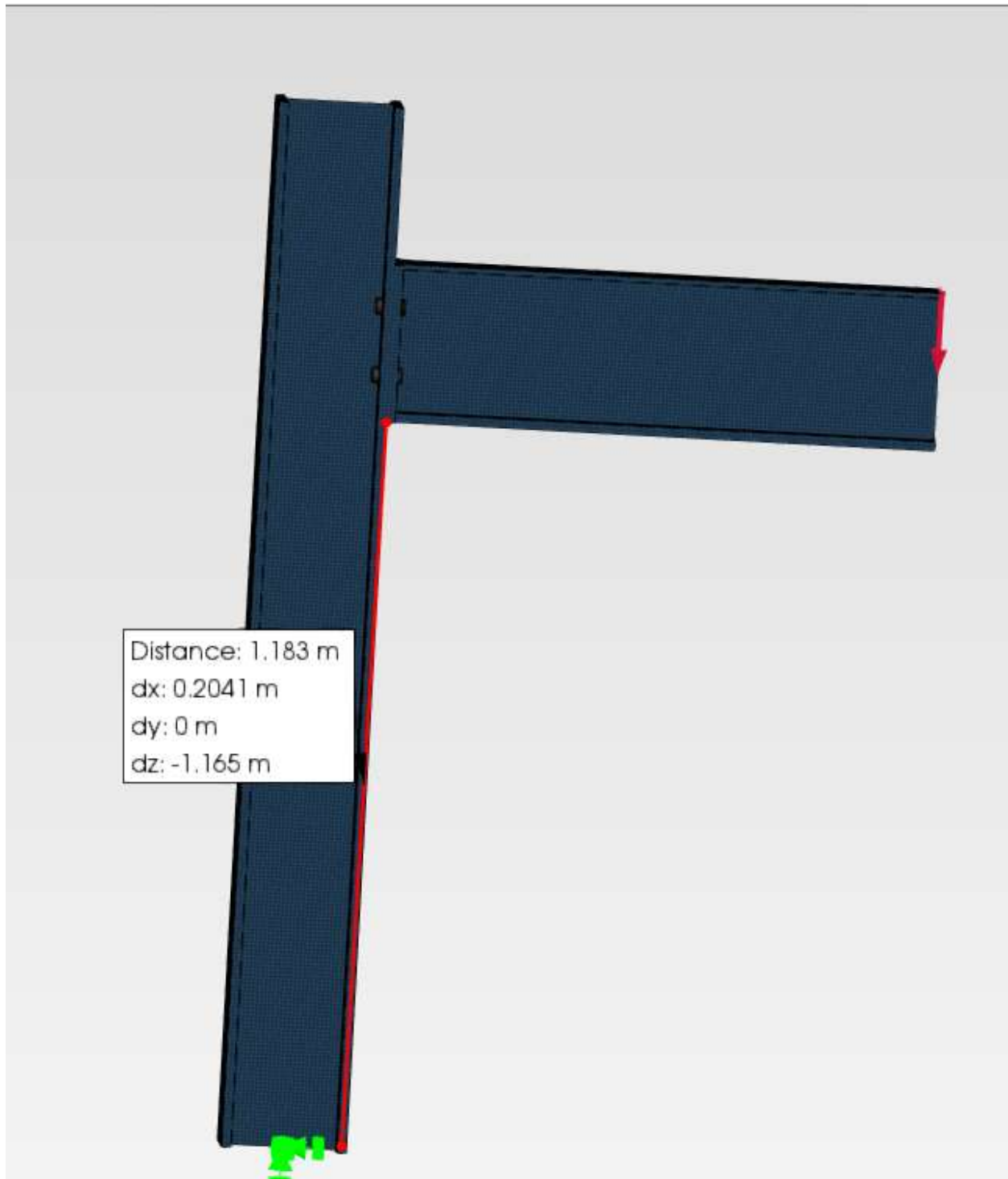So if we remesh it first before we drill the hole, otherwise we the get square hole

It's the tiny trick of the trade

DISP: ALL
Unit: m
Automatic

+0.04677
+0.04157
+0.03638
+0.03118
+0.02598
+0.02079
+0.01559
+0.01039
+0.005196
+0

Max: 0.04677 m
Node id: 625

Mesh
  Parts (5)
  Node sets
  Element sets (2)
  Surfaces
Results
  Field outputs (5)
    DISP
      ALL
      U1
      U2
      U3
    STRESS
      MISES
      TRESCA
      S11
      S22
      S33
      S12
      S23
      S13
      SGN-MAX-ABS-PRI
      PRINCIPAL-MAX
      PRINCIPAL-MID
      PRINCIPAL-MIN
    TOSTRAIN
    FORC
    ERROR
  History outputs

Name: Analysis-1.frd Date: 03/12/2023 Time: 21:44:29
Step: #1 Increment: #1 Analysis time: 1 s
Deformation variable: Displacements Deformation scale factor: 0

0   0.2   0.4   0.6   0.8   1 m

03/12/23 21:41:49   Add contact pair: Solid_part-1_to_Merged_part-4
03/12/23 21:41:49   Add contact pair: Solid_part-1_to_Merged_part-3
03/12/23 21:41:49   Add contact pair: Solid_part-1_to_Merged_part-1
03/12/23 21:41:58   Add step: Step-1
03/12/23 21:42:13   Add BC: Step-1: Fixed-1
03/12/23 21:42:54   Add load: Step-1: Concentrated_force-1
03/12/23 21:43:05   Model exported to file: C:\Users\denta\Downloads\PrePoMax v1.3.5.1\Analysis-1.inp

---

STRESS: S33
Unit: Pa
Automatic

+4.127E+09
+2.712E+09
+1.297E+09
- 1.175E+08
- 1.532E+09
- 2.947E+09
- 4.362E+09
- 5.777E+09
- 7.192E+09
- 8.607E+09

Max: 4.127E+09 Pa
Node id: 24689

Mesh
  Parts (5)
  Node sets
  Element sets (2)
  Surfaces
Results
  Field outputs (5)
    DISP
      ALL
      U1
      U2
      U3
    STRESS
      MISES
      TRESCA
      S11
      S22
      S33
      S12
      S23
      S13
      SGN-MAX-ABS-PRI
      PRINCIPAL-MAX
      PRINCIPAL-MID
      PRINCIPAL-MIN
    TOSTRAIN
    FORC
      ALL
      F1
      F2
      F3
    ERROR
      STR
  History outputs

Name: Analysis-1.frd Date: 03/12/2023 Time: 21:44:29
Step: #1 Increment: #1 Analysis time: 1 s
Deformation variable: Displacements Deformation scale factor: 0

0   0.2   0.4   0.6   0.8   1 m

03/12/23 21:41:49   Add contact pair: Solid_part-1_to_Merged_part-4
03/12/23 21:41:49   Add contact pair: Solid_part-1_to_Merged_part-3
03/12/23 21:41:49   Add contact pair: Solid_part-1_to_Merged_part-1
03/12/23 21:41:58   Add step: Step-1
03/12/23 21:42:13   Add BC: Step-1: Fixed-1
03/12/23 21:42:54   Add load: Step-1: Concentrated_force-1
03/12/23 21:43:05   Model exported to file: C:\Users\denta\Downloads\PrePoMax v1.3.5.1\Analysis-1.inp

Ready

Unit system: m, kg, s, °

0% error wow, the mesh is so well definied all convereged

Distance: 1.183 m
dx: 0.2041 m
dy: 0 m
dz: -1.165 m

Just 100kg excluding selfweight (density =0 instead of 7850kg/m3 ->Not a real project anway)

Vertex modelling is so good, like CAD (draw point by point to create an area then extrude the area).
Getting faster.