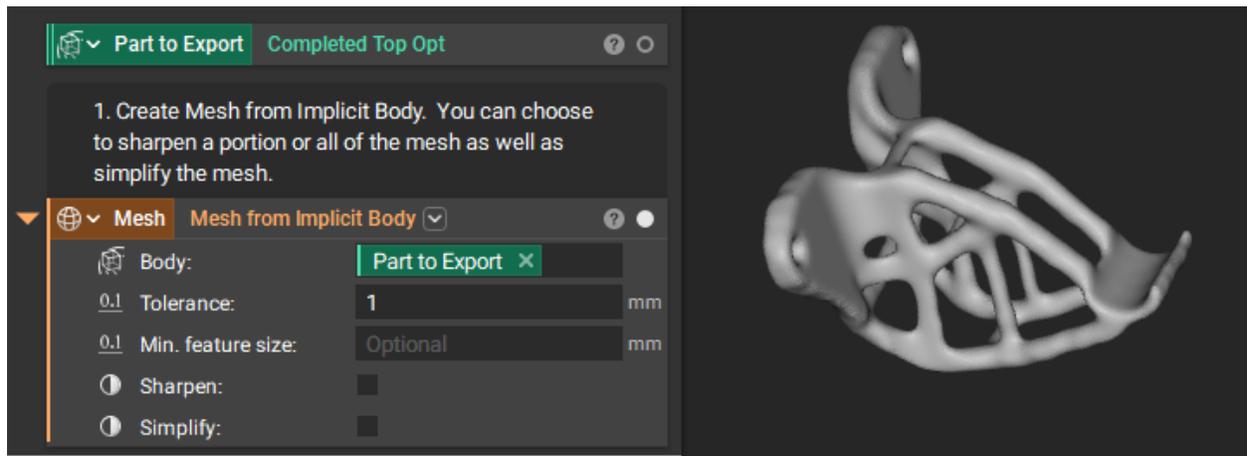


Follow Along: CAD and Mesh Export

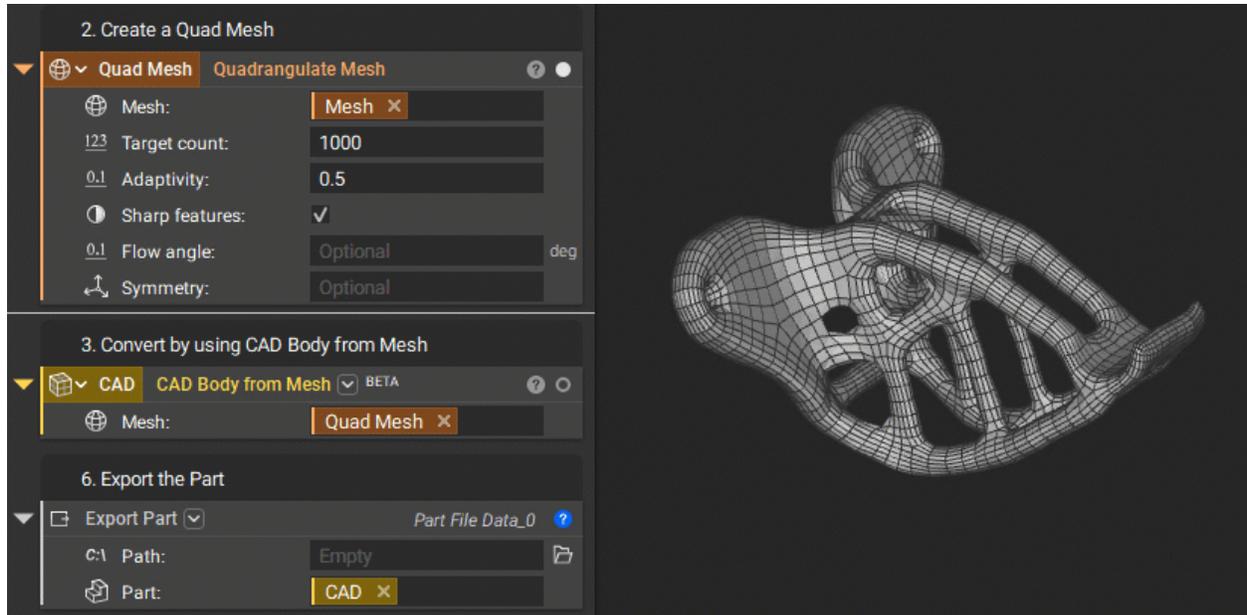
This lesson takes a completed topology optimization of a bracket and converts it to a mesh and then a CAD body for exporting as a STEP or Parasolid file, as well as how to export a mesh. Note that the **CAD from Mesh** block should only be used for simpler parts like a topology optimization and not a lattice structure.

Please download the nTop file below to follow along with the tutorial.

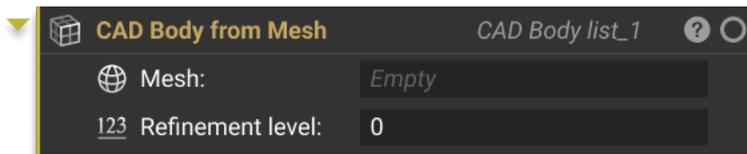
Step 1: Convert your part to a mesh using the **Mesh from Implicit Body** block. If you plan to export a mesh, you would then use the Export Mesh block.



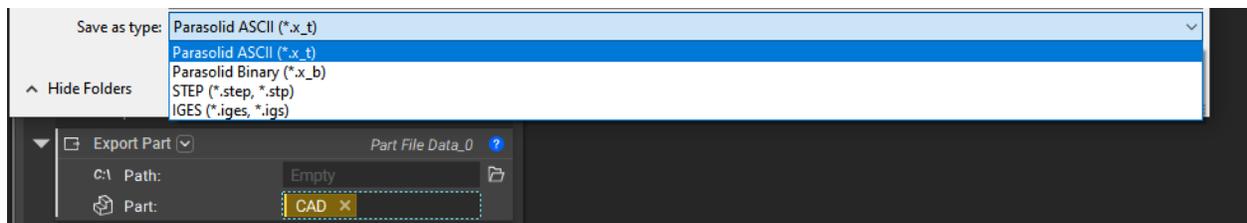
Step 2: Convert the refined Mesh to a quad mesh by using the **Quadrangulate Mesh** block. The quad mesh allows for easier and faster conversion to a CAD Body format. A quad mesh is not just a step for converting, but also a very useful model itself. The mesh can be exported into other systems by using the **Export Mesh** block. The **Quadrangulate Mesh** block isn't meant for lattice conversion. With lattices being so complex, the Quad mesh will try to run but most likely get stuck or fail. The **Quadrangulate Mesh** block was designed for use with Topology Optimization workflows.



Step 3: Convert the refined (or unrefined), quad mesh, into a CAD Body using the **CAD Body from Mesh** block.



Step 4: Add an **Export Part** block and choose your save location and file type, either STEP or Parasolid. If you are exporting to SolidWorks or Siemens NX, we recommend using the Parasolid format so that no translations are needed.



Once your part is exported, you have the freedom to import into any program that accepts STEP or Parasolid inputs. The part can have further operations applied to it, be added back to a larger assembly, and more.