

LuBan

3D Window

Mesh → Split

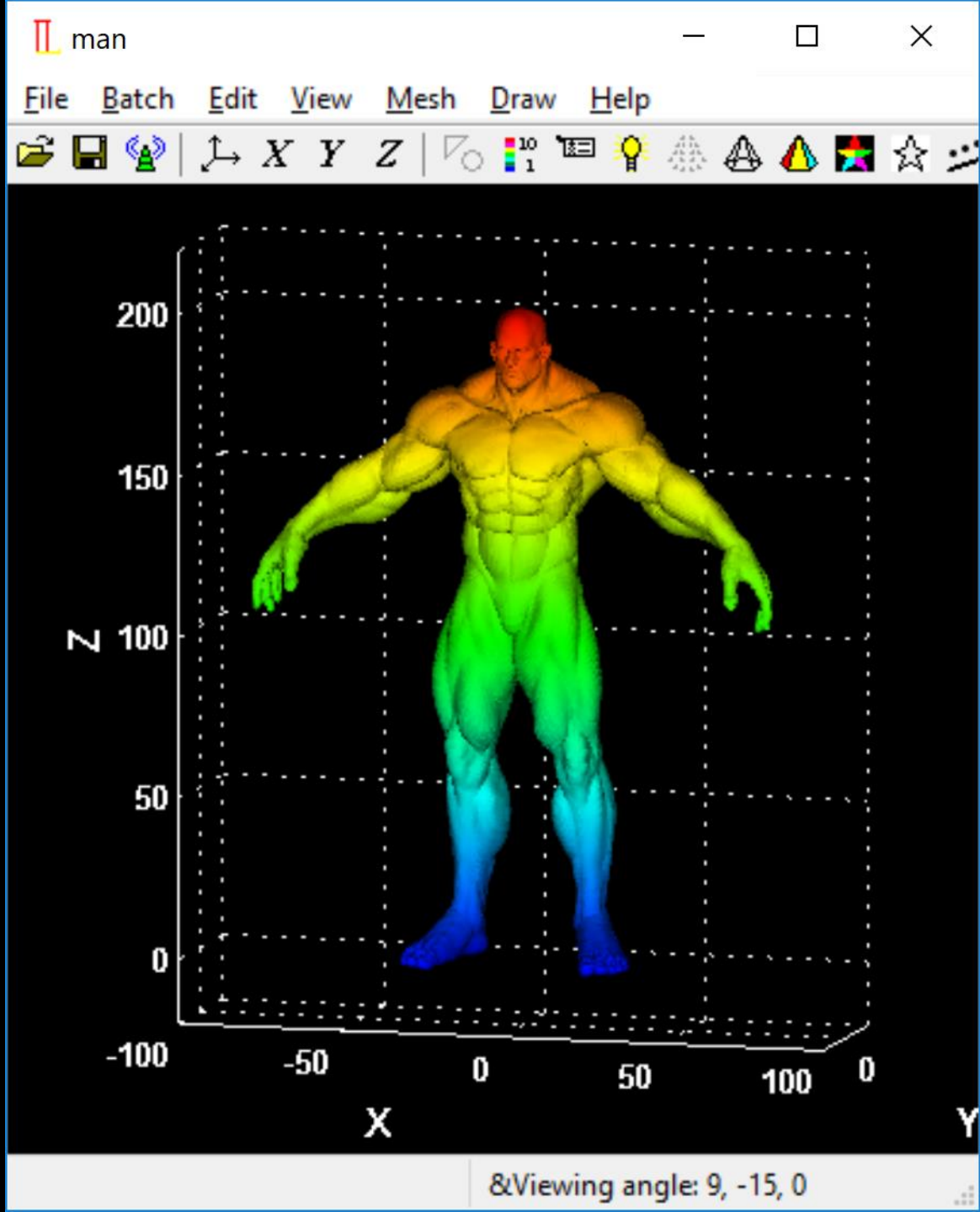
LuBan can segment a 3D mesh into parts automatically, as described in “Get started”. **LuBan** also supports manual segmentation of a mesh by the use of a cutting plane.

You need to specify the cutting plane by a plane equation: $Ax + By + Cz = D$, where A, B, C, and D are parameters to input.

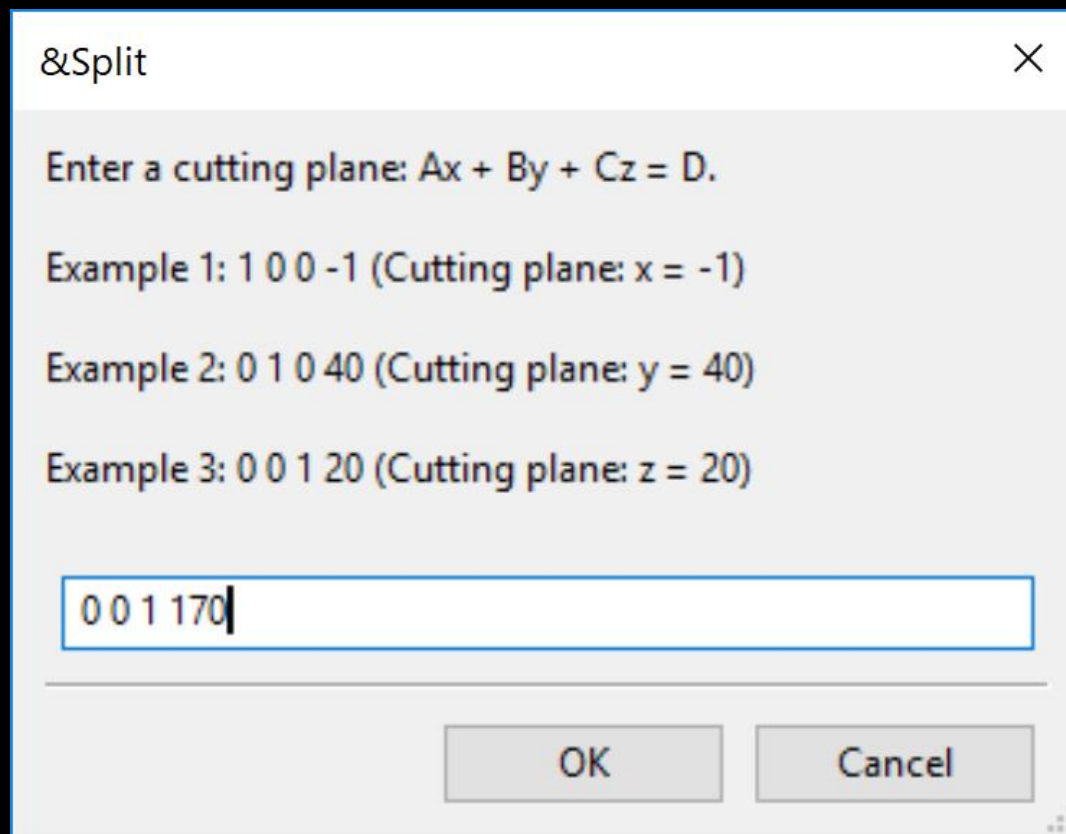
You can also specify whether you want connectors to be generated on split parts.

Say you want to cut the head off. The cutting plane is about $z = 170$.

Click “Mesh → Split” and you will see a dialog box.



The cutting plane parameters are $A = 0$, $B = 0$, $C = 1$, and $D = 170$; so the input numbers are 0 0 1 170. Click OK.



The image shows a software dialog box titled "&Split" with a close button (X) in the top right corner. The dialog contains the following text:

Enter a cutting plane: $Ax + By + Cz = D$.

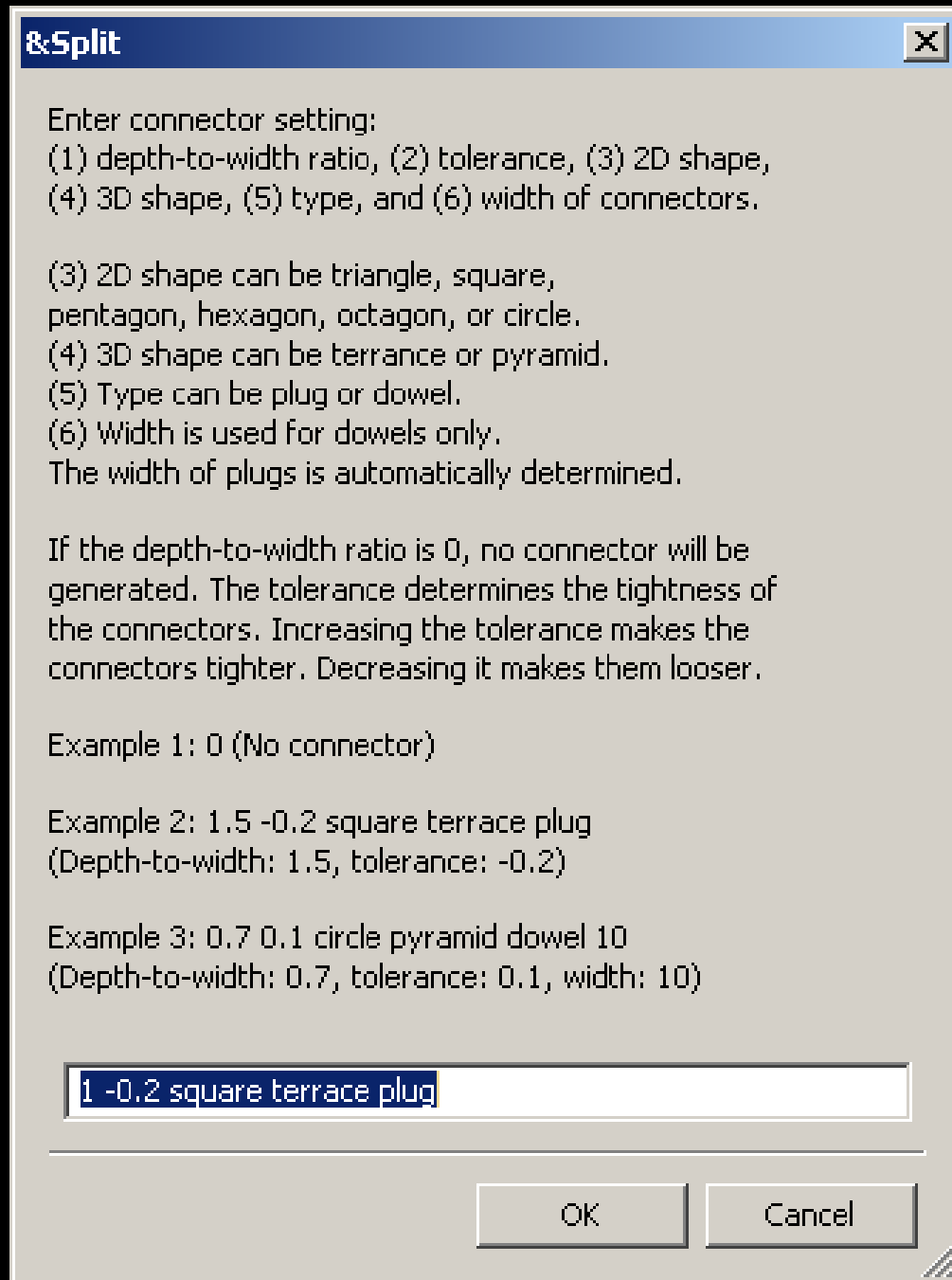
Example 1: 1 0 0 -1 (Cutting plane: $x = -1$)

Example 2: 0 1 0 40 (Cutting plane: $y = 40$)

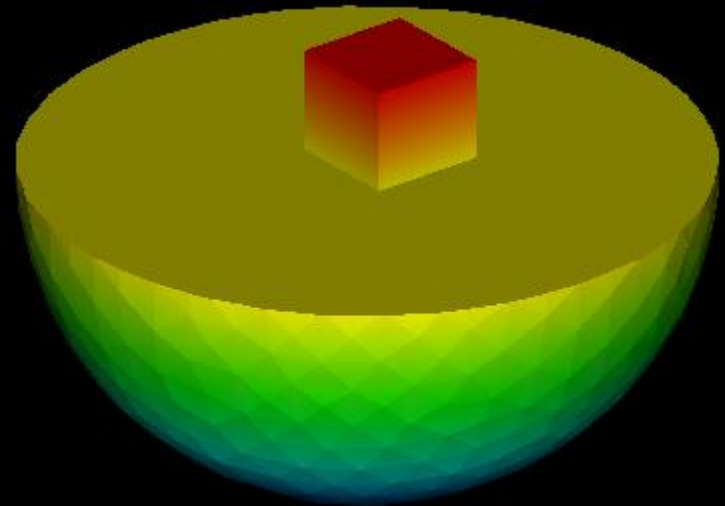
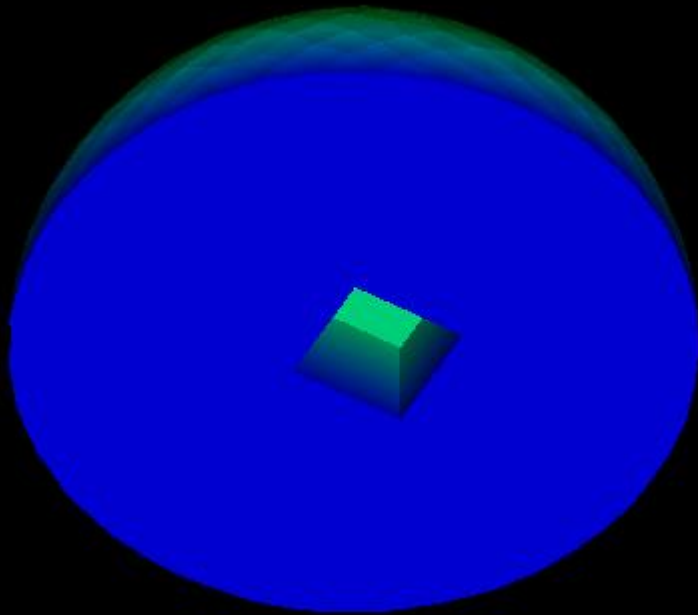
Example 3: 0 0 1 20 (Cutting plane: $z = 20$)

Below the examples is a text input field containing the values "0 0 1 170". At the bottom of the dialog are two buttons: "OK" and "Cancel".

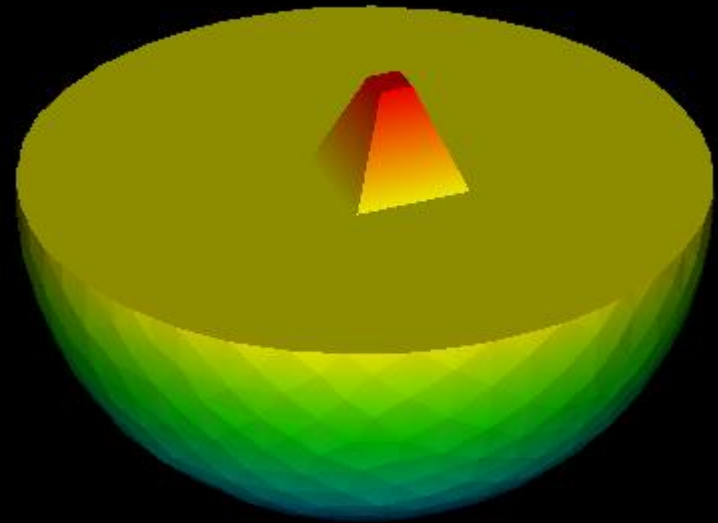
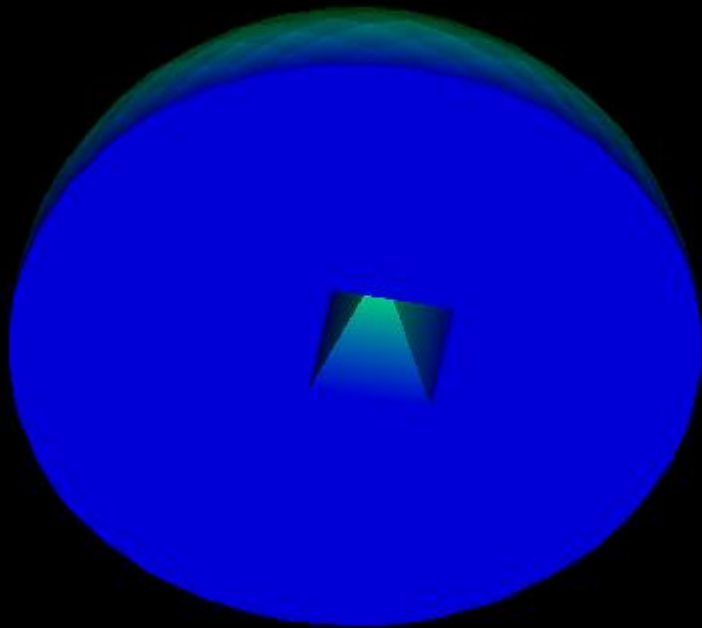
The second dialog box is for setting up connectors. There are two types of connectors: plug and dowel. If using dowel, a hole is generated on each side of a connector.



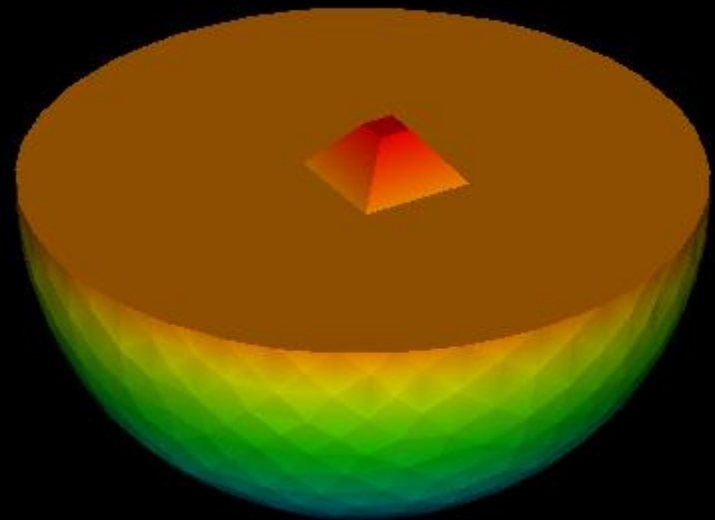
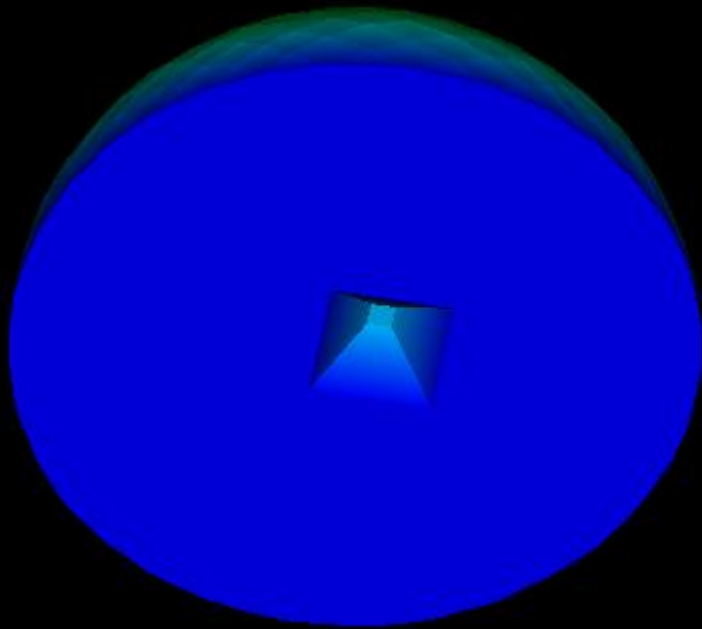
Input: 1 -0.2 square terrace plug



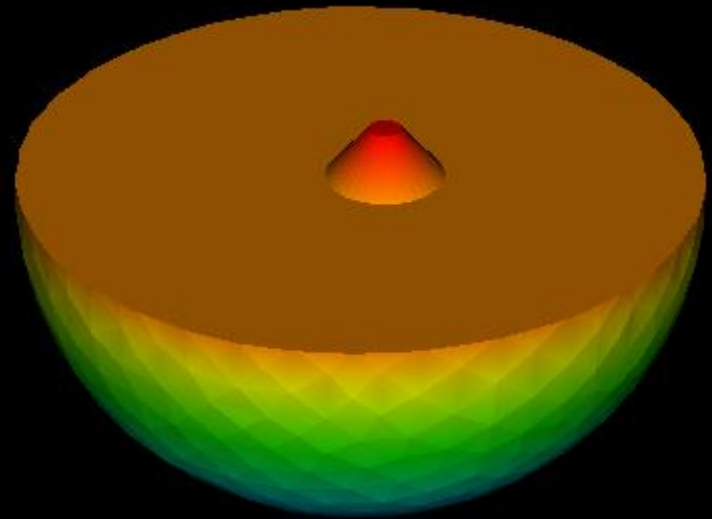
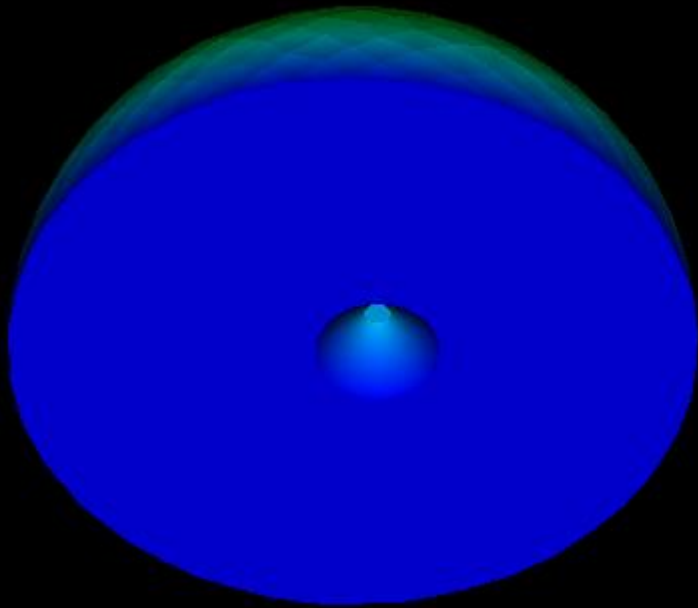
Input: 1 -0.2 square pyramid plug



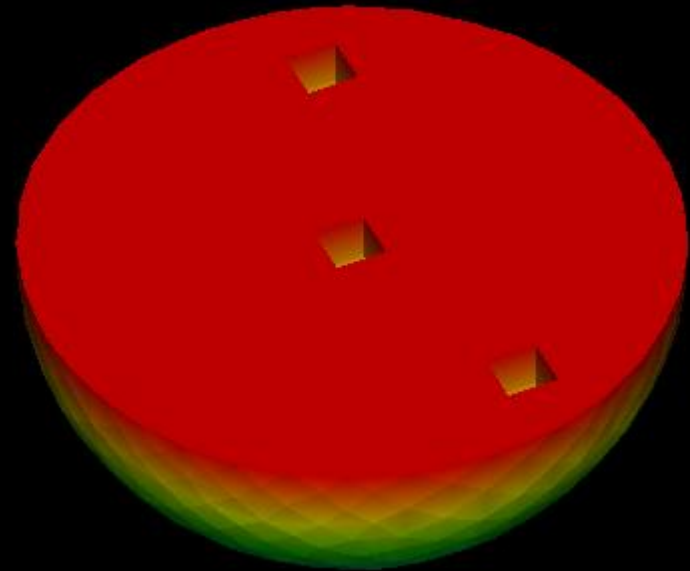
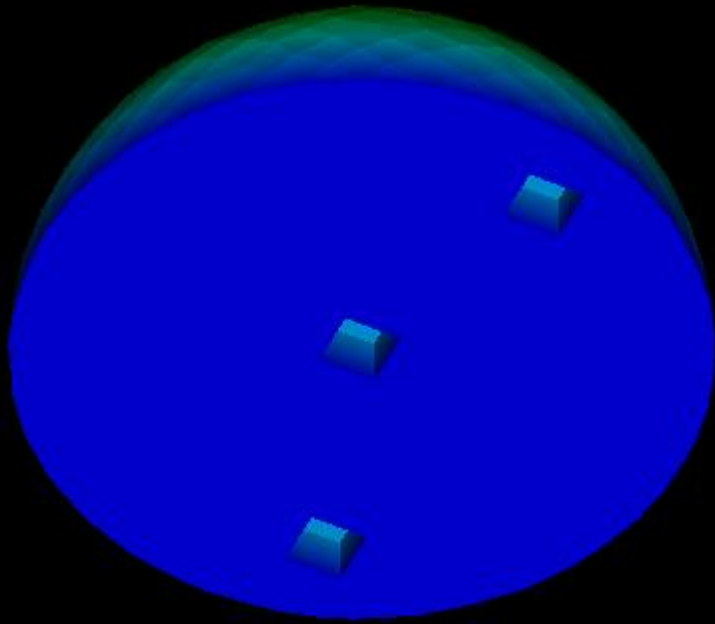
Input: 0.5 -0.2 square pyramid plug



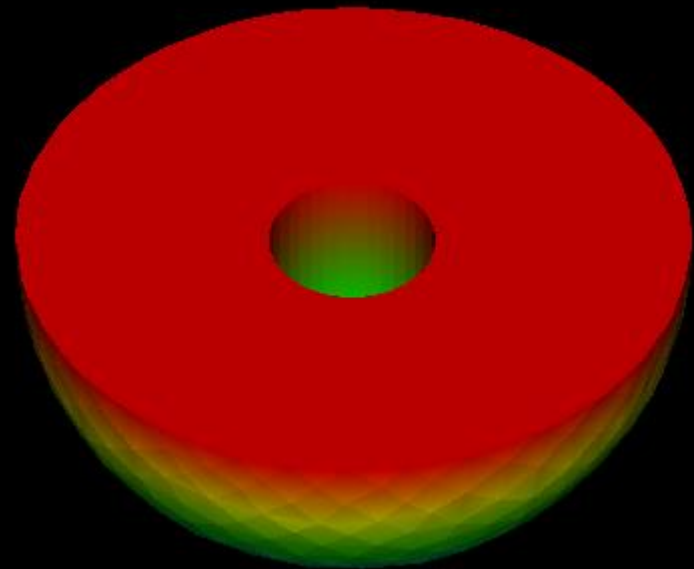
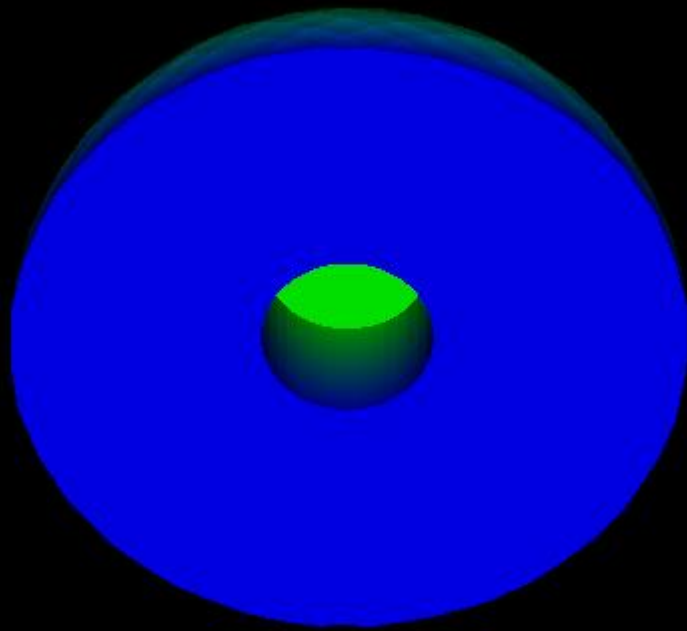
Input: 0.5 -0.2 circle pyramid plug



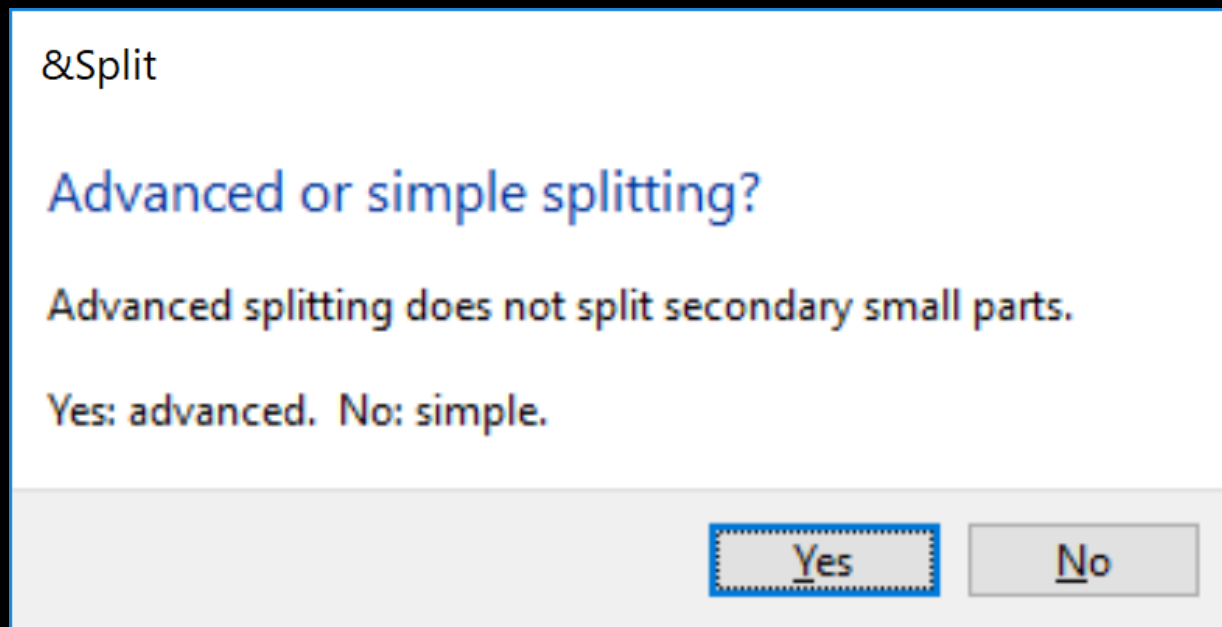
Input: 1 -0.2 square terrace dowel 10



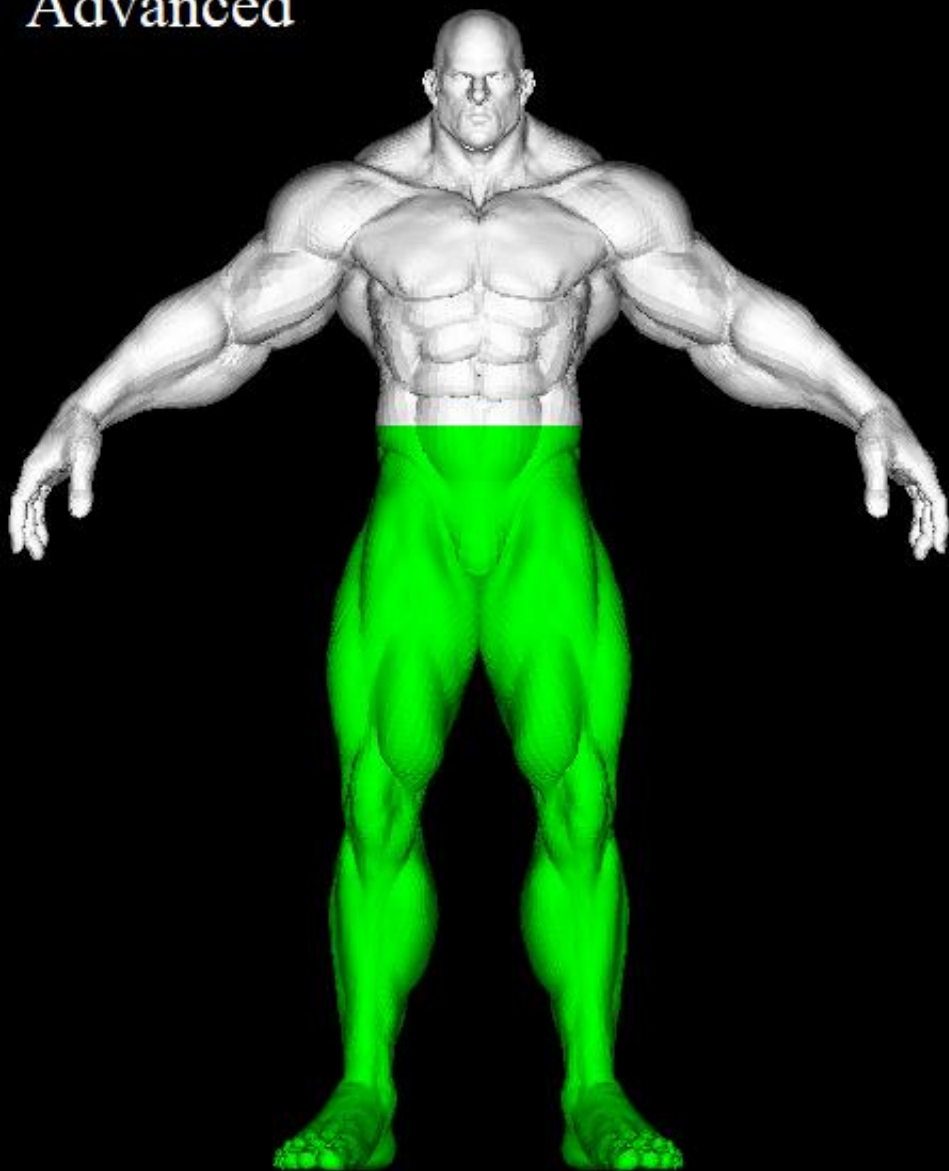
Input: 1 -0.2 circle terrace dowel 30



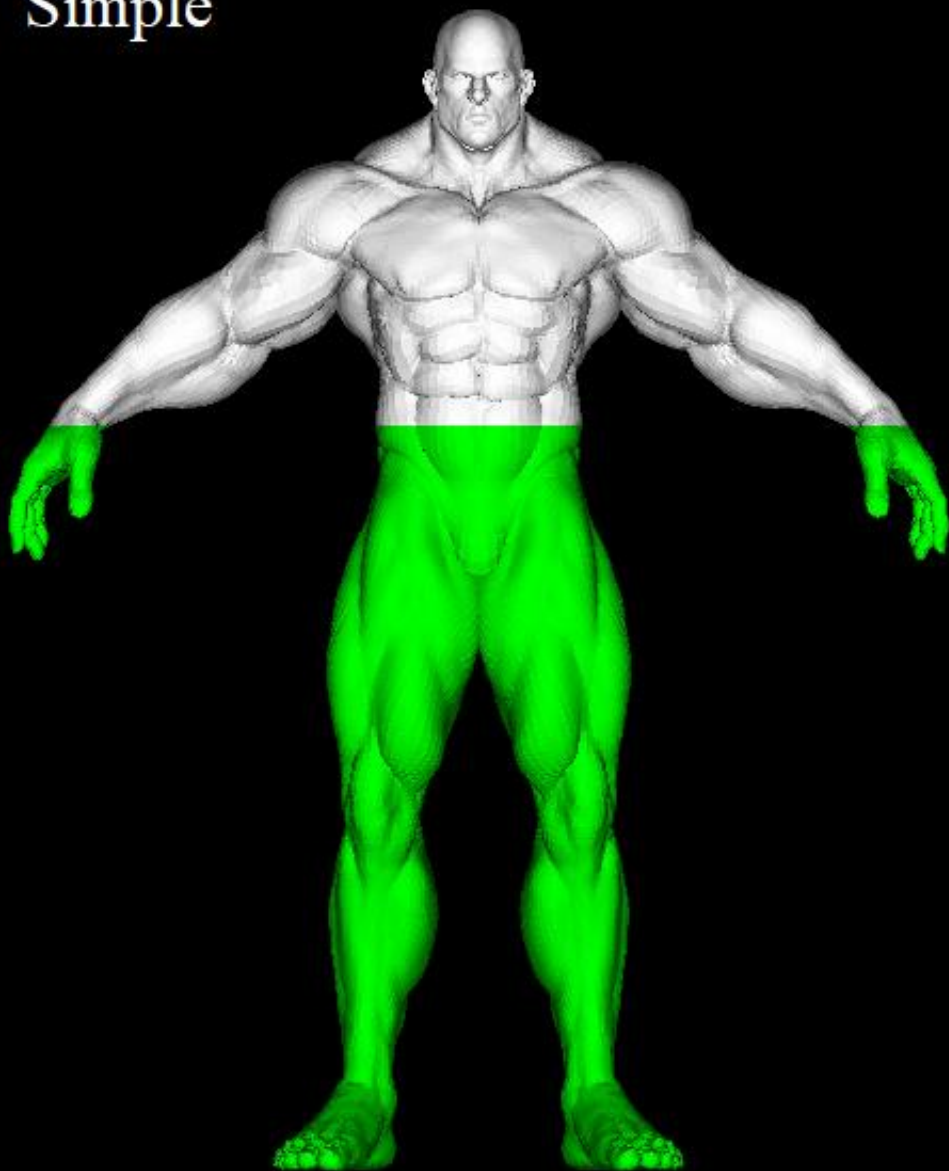
The third dialog box asks for a method of splitting. The advanced method does not split secondary small parts, while the simple method splits all parts.

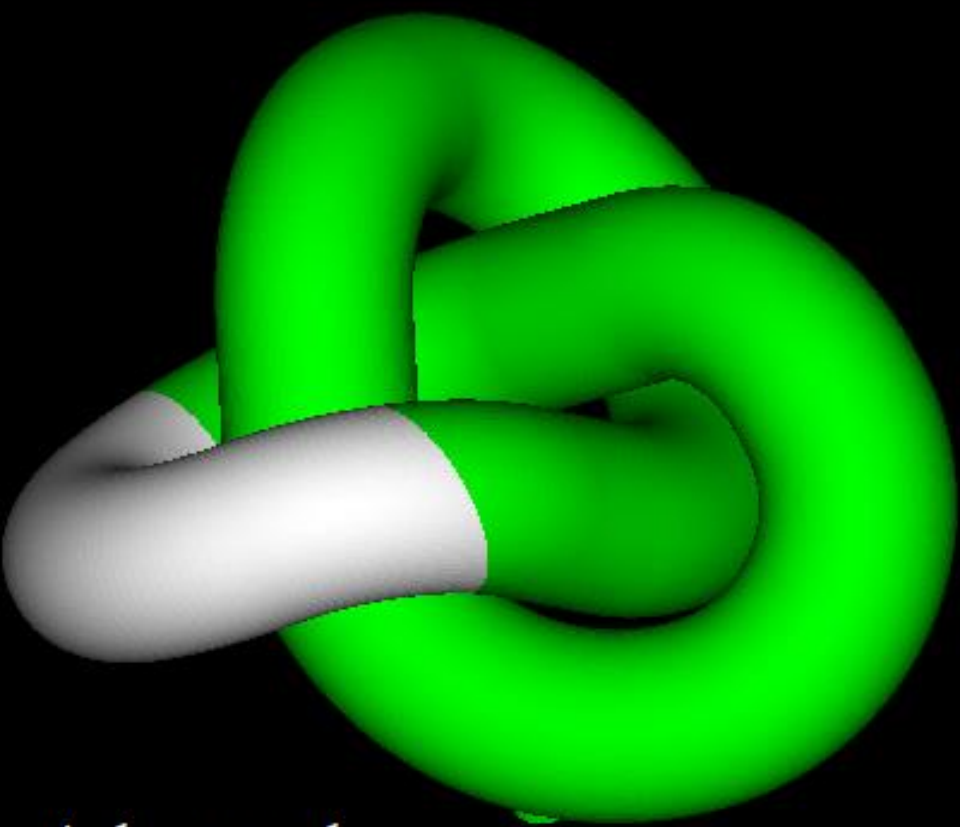


Advanced

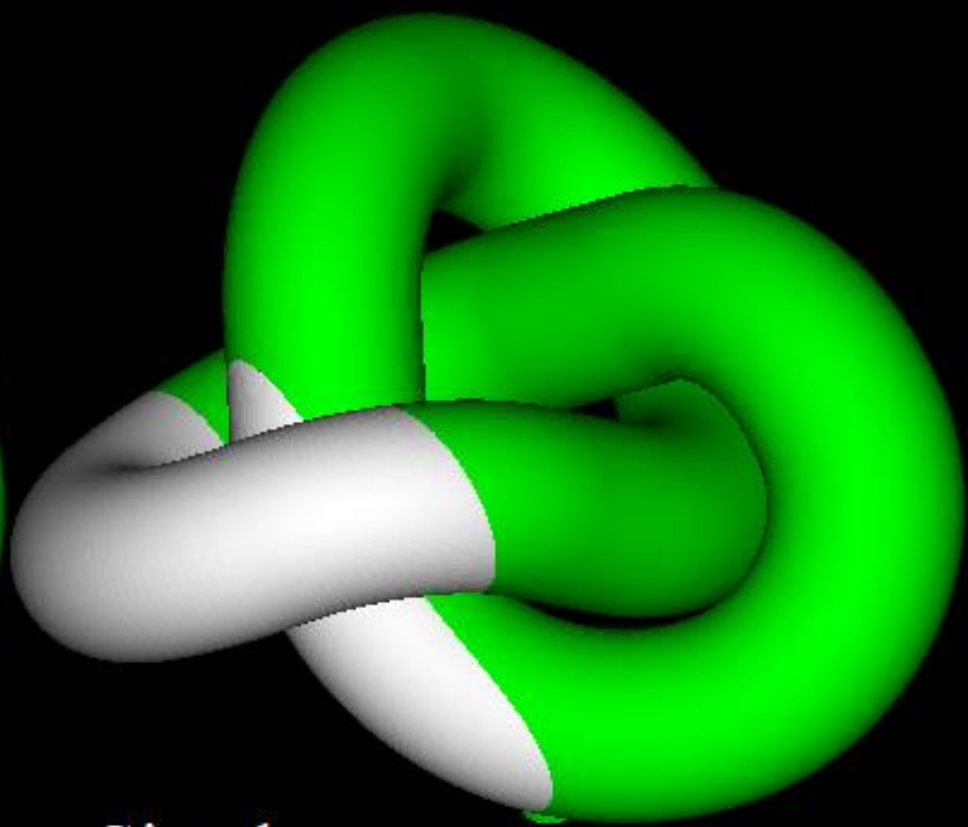


Simple





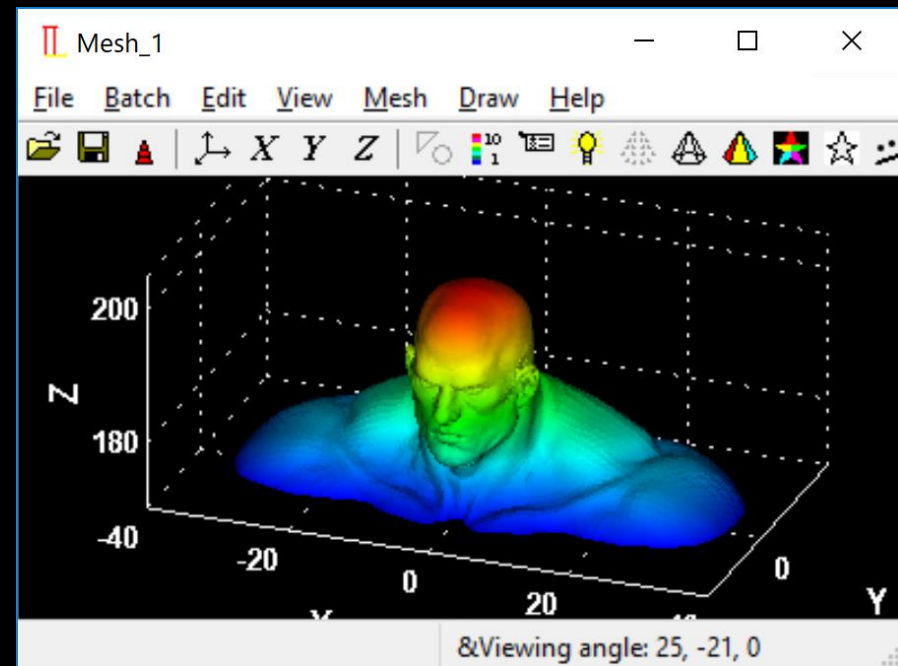
Advanced



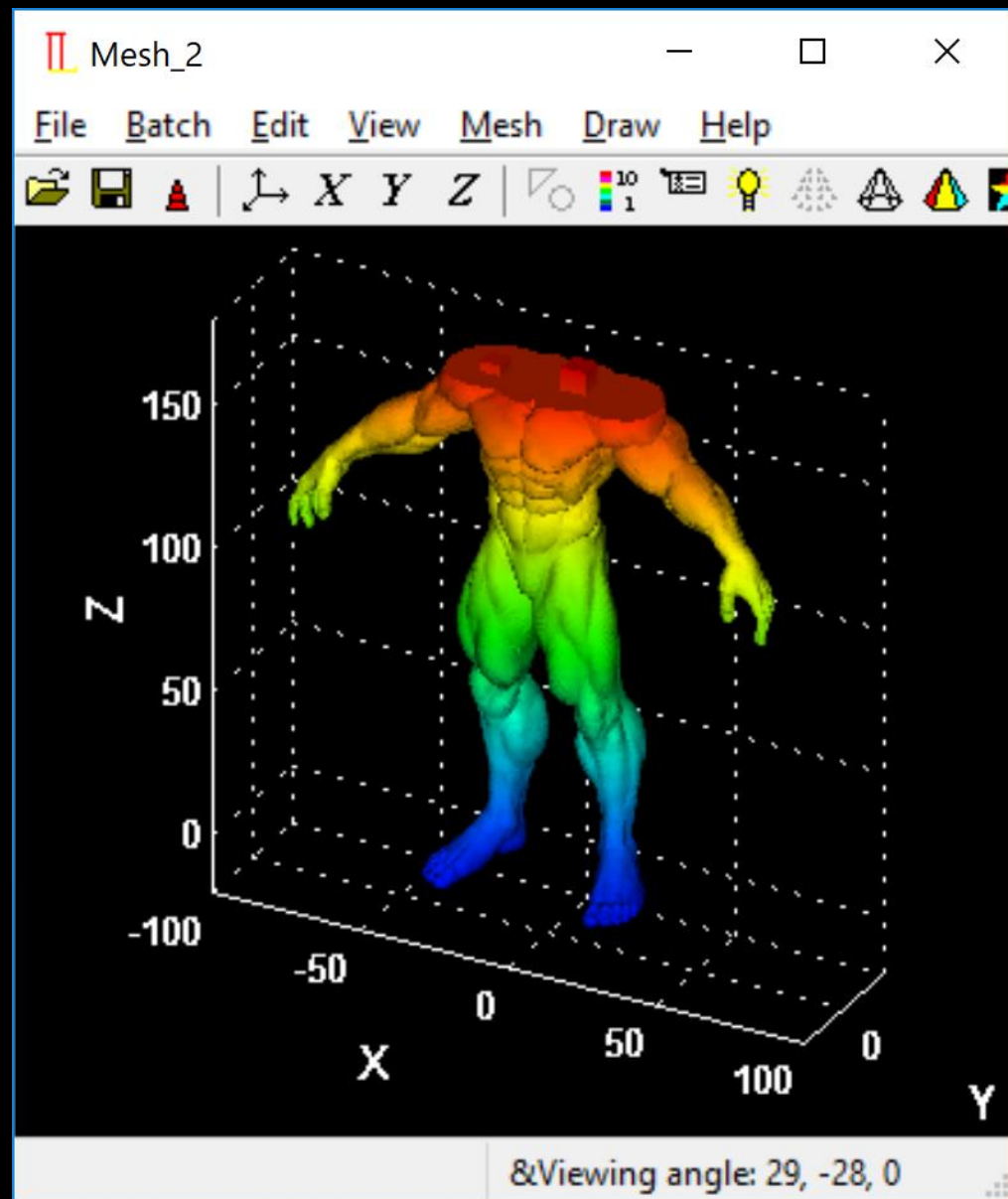
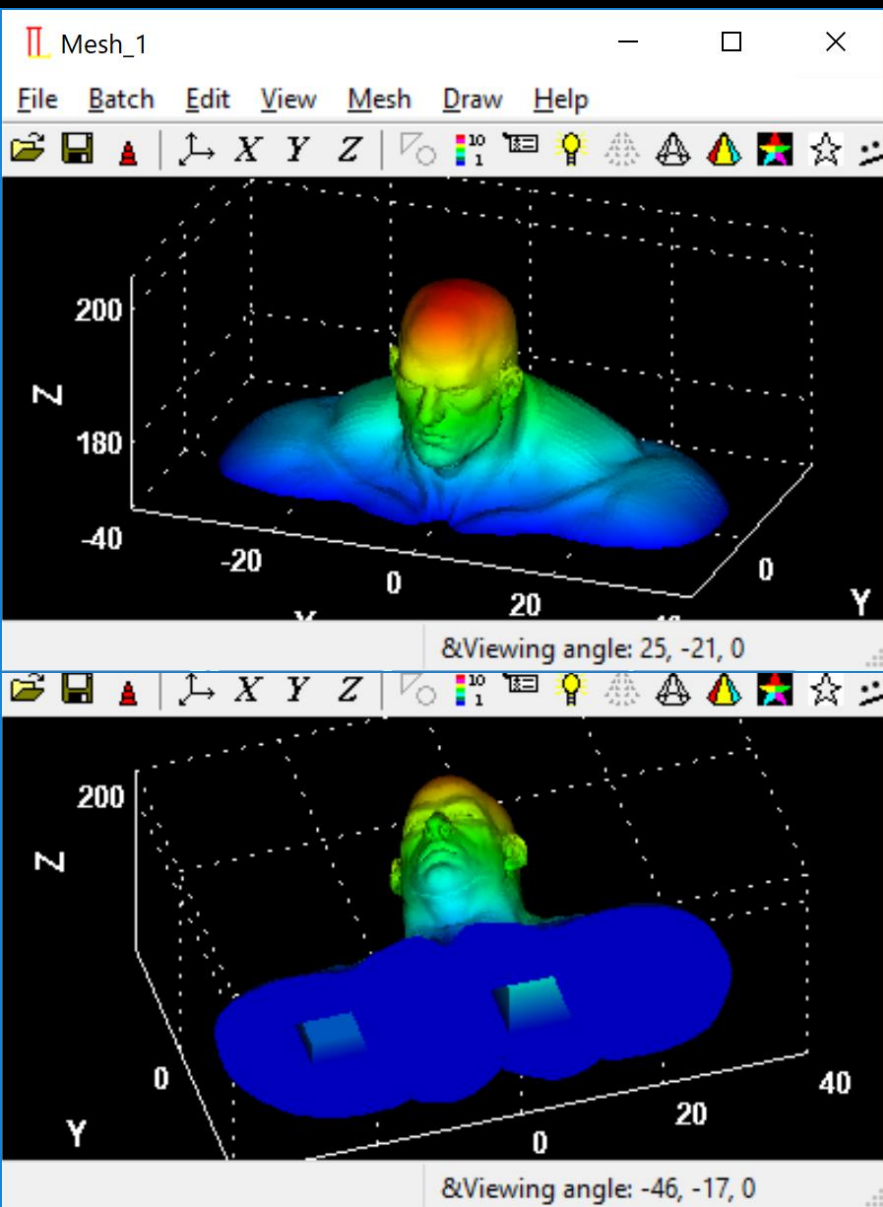
Simple

Select an exporting folder. **LuBan** will generate two mesh and load them into a new window. A window that has more than one figure files is called a batch in **LuBan**. You can press Up and Down, or Left and Right to browse a batch.

Each figure in the batch corresponds to a disk file that is just generated from “Mesh \rightarrow Split”.



In the results; connectors are generated.



Sometimes
after split, you
have a mesh
with two
separate parts.
You can use
“Mesh →
Separate” to
separate the
disconnected
parts.

