

Homework 2: Halfedge Data Structure for Triangle Mesh

Here is what you need to do:

0. Download the codes package from:
www.ece.lsu.edu/xinli/teaching/EE4702/homework2.zip
(Homework description, codes, and several triangle meshes)
1. Compile the halfedge meshlib, read it and understand it.
2. Merge it and your first homework. So that you can read in a mesh using the halfedge data structure, and render the mesh on the screen correctly.
3. Using the half-edge meshlib, complete the following:
 - 2.1 Compute how many connected components (#C) a given mesh has;
 - 2.2 Compute how many boundary loops (#B) a given mesh has;
 - 2.3 Compute the Euler number = $F - E + V$, report it (#X)
 - 2.4 Render all the boundary loops on the mesh (e.g. highlighted in a different color)

Please test on all provided meshes.

- Send the program so that the boundaries are illustrated clearly.
- Send the results #C, #B, #X for all meshes to me.

DUE: 11:59pm Sep. 26