

Numerical PDE HW 2

In 2D our PDE domains frequently consist of a bunch of triangles. We are going to create a format for reading and writing such domains. We will use the file formats from the Triangle Mesher. All the files below refer to the A files in <http://www.math-lab.mtu.edu/~struther/Courses/4620/HW/HW2Files/>

1. Read in the node file and plot the points in 2D.
2. Read in the element file and plot the triangles that are defined by the two files.
3. Create a standalone command/function that takes a string "FileName", reads in two files "FileName.node" and "FileName.element" and plots the mesh.
4. Create files for your own mesh using this storage scheme and plot your mesh.
5. Create a standalone command/function that writes a mesh to two files (you may already have done this) using our naming convention. The input should be your mesh and a "string" giving the filename. Test your code by exporting and reimporting your mesh.