CIS 441/541: Project #1E
Due October 27th, 2014 (which means 6am October 28th)
Worth 6% of your grade

Instructions
1) Download reader1e.cxx. It extends the previous “GetTriangles” routines by setting the normal at each vertex.
2) Download the geometry file “proj1e_geometry.vtk”.
3) NOTE: there are new data members for the Triangle class.
   class Triangle
   {
   public:
   double X[3];
   double Y[3];
   double Z[3];
   double colors[3][3];
   double normals[3][3];
   
  Normals is indexed by the vertex first and the dimension second.
   int vertexId = 0;
   int x = 0, y = 1, z = 2;
   normals[vertexId][y] = ...;

4) Download the file shading.cxx. This file defines a data structure that contains the parameters for shading.
5) Extend your reader to do Phong shading. Use two-sided lighting for the diffuse component, but only one-sided lighting for the specular component.
6) The correct image is posted to the website

When you are done upload the following to Blackboard:
- your code
- a screen shot of the differencer program congratulating you
- if there are differences, send me the differenceMap.png that differencer produces and image output of the program.