MECH 434/534 COMPUTER-BASED MODELING AND SIMULATION

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1. Follow the Utilities link from the course web-site and read the instructions on how to download, compile, and execute the sample Visual C++ project available at the web-site.

http://network.ku.edu.tr/~cbasdogan/courses/Computer-Based/syllabus534.htm

2. Download **mech534hw1.rar** and write a C program to read the data file included in the archive. The data file contains vertex and connectivity information for a polygonal object in the form of a triangle strip (see the format of the data file below). After reading the data file, store its content into three "structures": one for the vertices (store the x, y, and z coordinates), one for the polygons (store the connectivity information), and one for the polyhedron (store the number of vertices and polygons). Then, output the data to a new text file in the same format using your own structures.

Note: The sample source file you are provided with is strictly commented. You are only required to "fill in the blanks" by adding your code in appropriate spaces as instructed in the code.

Format of the data file:

```
N: # of vertices
Vertex1X vertex2Y vertex3Z
...
VertexNX vertexNY vertexMZ
M: # of polygons (i.e. triangles)
vertex_1_index vertex_2_index vertex_3_index
vertex_M_index vertex_M_index vertex_M_index
```