

## Programming Lab 05

I will provide you with the following header file for a triangular mesh for a cube:

```
class CubeMesh : public Mesh {
public:
    int VertexCount(void);
    Point GetVertex(int i);
    Vector Dimensions(void);
    Point Center(void);
    int FaceCount(void);
    Face GetFace(int i);
    int EdgeCount(void);
    Edge GetEdge(int i);
private:
    static const Point vertices[8];
    static const Face faces[12];
    static const Edge edges[12];
};
```

(the Affine.h and Mesh.h header files have been included). You are to implement the member functions and initialize the static constant data members. You are free to use any object coordinate system you wish. However, your class must work correctly with the test program DT285\_simple\_cube.cpp that I will supply.

Your submission for this part of the assignment should consist of a single file named CubeMesh.cpp. You may include only the CubeMesh.h header file (note that the Mesh.h and Affine.h header files will automatically be included as a result).