Homework IV

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1 Mesh Optimization

In this homework you will implement several mesh operators and will integrate them within our Java applet/Application. Data structures to traverse the connectivity are provided. These data structures are not based on half-edges. Instead, we our `Graph` class represents the graph defined by the V vertices and E edges of the mesh, and supports the operation

```
GraphEdge Graph.getEdge(int iV0, int iV1)
```

The `GraphEdge` data structure supports the following two operations

```
    int GraphEdge.getIndex()
int GraphEdge.getVertex(int i)
```

Exercise 1. You will implement the non-shrinking $\lambda|\mu$ smoothing algorithm. For this

Exercise 3. Implement edge-collapse scheme with hints.

Exercise 4. How to deal with edges, singular edges, and ridge edges ?

Exercise 4. Show that a vertex-collapse scheme can be implemented with an edge-collapse scheme.

2 Dynamic Connectivity

Exercise 5. Implement with hints

Exercise 6. Give them some scanned meshes and target edge length ranges, ask them to produce meshes at multiple resolutions.

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