Conceptual Questions:

* (10 pts) Given a mesh with all of its half-edges created but none of its SYM pointers set, what is the minimum information needed to determine which half-edge should be the SYM of some other half-edge?

To determine whether 2 half-edge should be the SYM of each other, we only to compare whether their the startpoint and endpoint are same. The endpoint is the vertex they point to and the startpoint is the vertex their former edges point to.

* (5 pts) Given the parallel nature of OpenGL shader execution, what do you suppose is a downside to using branching statements (e.g. if statements) in a shader program?

Take if statement as an example,

1. If(A == false)

2. B = ture;

3. If(B != ture)

4. Then

5. Do C

in respect of the parralled nature, there will be more than one threads are running for this code. There may be a error that the if of the line1 and line3 are both true. This is because when thread1 is executing between line1 and line3, thread2 will execute that A = ture, so the B should be false, but the fact is that the B is true. This will cause a logical error.

Code Requirements:

I’ve done all 6 questions, and the result could be seen in the running windows. You could see the cube before loadOBJ, and this cube is the answer of 4.2

Extra Credit:

5.2 You can click exportOBJ on the Bar, and you can find the export.obj in the upper folder. And using the loadOBJ, you can load it.

(no uv)

5.3 keep press X, then you will find the Function effect;