Assignment 2 README

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This homework is implemented in **VS2015** with **glut**. For 3D models, I use the Stanford 3D Scanning models. To simplify the I/O process and reduce the running time, I use the software **MeshLab** to reduce the original model face numbers and store the model in **.off** file (Princeton 3d object format).

I tried three models (bunny, dragon and armadillo) in variant face numbers. Screen captures of some results can be found in **/result** folder. The model I used can be found in **/model** folder.

Here is a brief explanation about my homework. The details can be found in *ques_h2.cpp*.

I treat spheres and mesh models as two different objects and process them in different ways. For spheres, they can be reflective or diffuse. For mesh models, they cannot be reflective in my implementation. They both have the function to judge the intersection with a ray light. The norm of every surface is computed by using 3D geometrical rules. The most important part is ray tracing and I implemented it by using recursive function. The color of each pixel needs to be computed by the function *trace()*. After computation, I use *glut* to draw the image on the screen.

To use other *.off* models, you can just modify the file name in main function and adjust the initial position in *OFFModel* construction function. Since it is a CPU version, the running time may be relative long.