SUMMARY

The assignment covered basic 3D rendering.The 3D rotations where achieved using unit quaternions.The ply model of Stanford bunny was used.The ply file contained triangular face verices and normal for each of the face where computed.A third party ply file reader was used.Basic lighting was used.The code implementation greatly follows the MVC paradigm and extensive use of OOP concepts.Code was fully seperated into 10 C++ classes,with controller taking care of the information exchange between model and view objects.

Lessons learnt:

1.Use of quaternions over normal Rotatef function.
2.OOP concept and MVC architecture.
3.In depth knowledge about C++ concepts.
4.Trackball implementation.
5.ply files and usages.
6.Memory leaks in C++.

References:

1.http://www.stackoverflow.com/ -for debugging
2.http://www.wikipedia.org/ – for quaternions and arcball implementation
3.opengl_programming_guide_8th_edition- The redbook -for OpenGL library functions
4.Lecture videos by Ken Joy in youtube channel UC Davis Academics