

Assignment-11

GoodLuck

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Problem statement :-

Write a c++/java program to draw 3-D cube & perform
a) scaling b) Translation c) Rotation

objective :-

To implement 3D object transformation using OpenGL.

Outcome :-

Students will learn to implement 3D transformations, scaling, rotation using OpenGL

S/H Requirements :-

64 bit linux OS, Qt creator

Theory :-

OpenGL :- Open graphics library is a cross language, cross platform application programming interface for rendering 3D & 2D vector graphics.

The OpenGL specification describes an abstract API for drawing 2D & 3D graphics. The earliest versions of OpenGL are residing with a corporation library called OpenGL utility library.

It provided simple, powerful, features which were unlikely to be supported in ~~cont~~ contemporary hardware such as a generating lines & shapes.

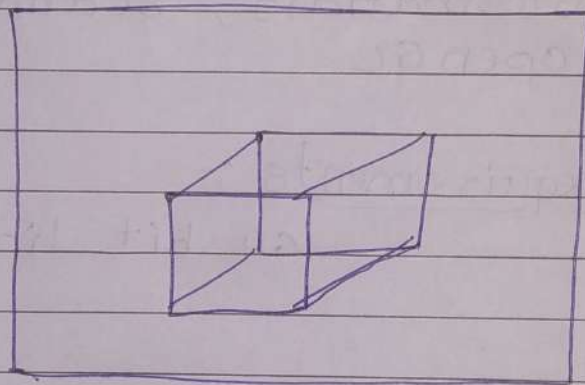
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Algorithm :-

- ① START
- ② Initialize Glut
- ③ Create a window.
- ④ Call translate function
- ⑤ call rotate function for x, y, z axes
- ⑥ call the scale function
- ⑦ STOP.

Output :-

cube rotating on axis



Conclusion :-

We implemented all 3D transformation like translation, scaling & rotation in OpenGL library.