3DViewer 1.0

Narchang & Aemelina©*

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1   Description

The 3DViewer 1.0 is our school project app written in C and C++. 3DViewer is a fast graphic application that allows users of all knowledge levels to quickly load files of OBJ filetype and view 3D wireframe models.

2   Features

This 3D viewing app is fully compatible with Windows 10/Linux and offers next features inside of its lightweight package:

- There can be only one model on the screen at a time.

- The maximum size of a model is 1,000,000 vertexes.

- The app can translate the model by a given distance in relation to

- the X, Y, Z axes.

- The program provides the ability to rotate the model by a given angle relative to its X, Y, Z axes and scale the model by a given value.

- The program can be built with Makefile which contains standard set of targets for GNU-programs: all, install, uninstall, clean, dvi, dist, tests, gcov.

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*the Madmothers team

The graphical user interface contains:

- A button to select the model file and a field to output its name.

- A visualisation area for the wireframe model.

- Buttons and input fields for translating the model.

- Buttons and input fields for rotating the model.

- Buttons and input fields for scaling the model.

- A button for customizing the type of projection (parallel and central).

- Buttons for setting up the type (solid, dashed), colour and thickness of the edges, colour of background, display method (none, circle, square), color and size of the vertices.

- A button for saving and uploading settings between program restarts.

- Information about the uploaded model - file name, number of vertices and edges.

- A button for saving the captured (rendered) images as bmp, jpeg and pdf files.

- A button for recording small screencasts of the current custom affine transformation of the loaded object into gif-animation (640x480, 10fps, 5s).

3D Viewer is 100% free for every user and can be used without any restrictions on both your home and work PCs.