3DViewer v2.0

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Chapter 1

About program

The program was developed as an educational project for "School 21". The project implements a program for visualizing a wireframe model in three-dimensional space. The program was developed in C++ language of the C++17 standard using the GUI library GTK+.

1.1 Install

You can install the program by running the command **m**ake install A folder named "3D_Viewer" will be created in the home directory, which will contain the executable file.

1.2 Open

You can open the program using the command **make open**

1.3 Uninstall

To remove the program, you can use the command **make uninstall**

Chapter 2

Main Window

2.1 Main Window

When you open the program, you will see the main window shown in the picture. To load the model, you need to click the **File Button** button and select the model file. Next, you need to click the **Load File** button

Figure 2.1: Main Window

Chapter 3

Main functionality

- AFFINE PANNEL consists of:
  - **Translation Panel**.This panel allows you to move the model along three axes X, Y, Z
  - **Rotation Panel**.This panel allows you to rotate the model along three axes X, Y, Z
  - **Scalling Panel**. This panel allows you to change the scale of the model along three axes X, Y, Z
  - The **Reset button** resets all changes to the movement, rotation and scaling of the loaded model.
- INFORMATION PANEL. Displays information about the loaded model file, the number of vertices and edges.
- LINE PANNEL. Allows you to set the line thickness, select the line color, select the line type: solid line, dotted line, remove lines
- POINT PANNEL. Allows you to set the thickness of the dot, select the color of the dot, select the type of dot: triangle, square, circle, do not display dots
- PROJECTION PANEL. Allows you to select the projection type: parallel or central
- AREA PANNEL. Allows you to set the background color

In the right part of the window we see a display of the model in space.

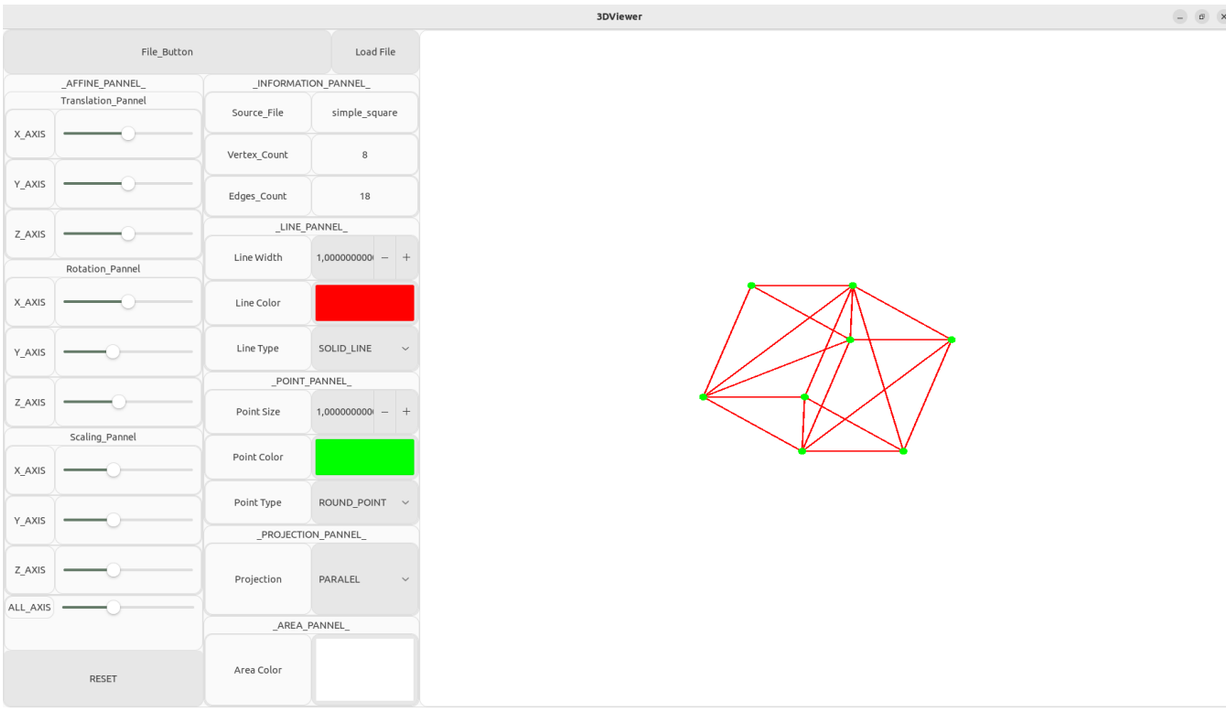

Figure 3.1: Functional