

Project B: Flying Through Little Robot and His Friends

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User's Guide

1) Goal

This project demonstrates a scene about a little robot, his tree friend, a snowman, and a torus. Basically, I use cubes and tetrahedrons, and spheres to design. Each vertex has a different color.

Here is the overview of project B

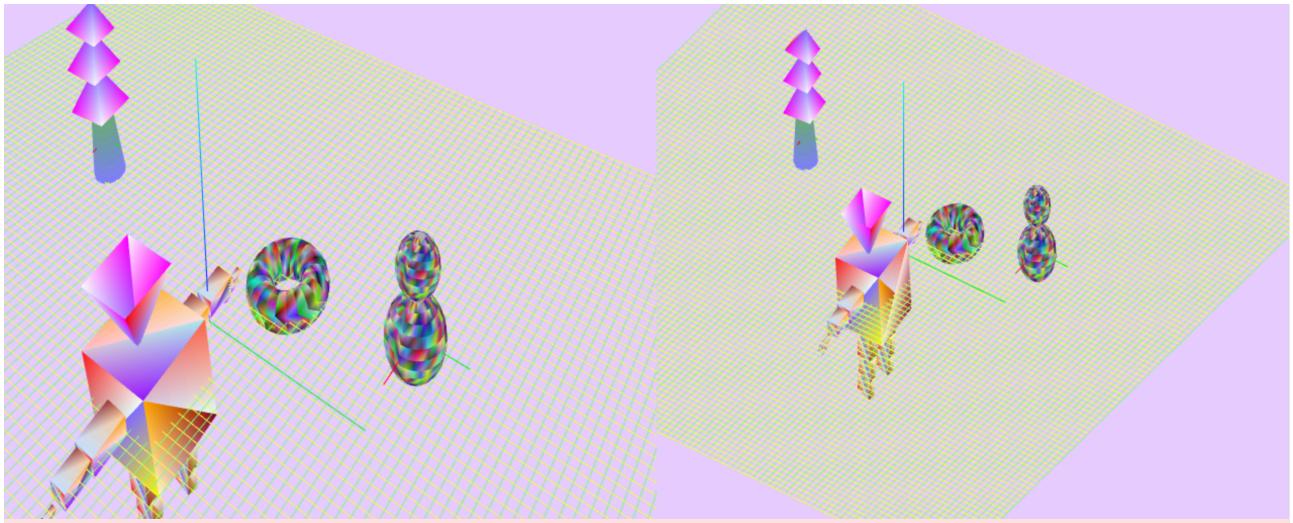


Fig1. The whole project

The left side is the perspective view, the right side is the orthographic view

2) Function 1

Users are able to use the keyboard to move them. For example, users can use WASD navigation to control the direction of the camera. 'W' is like zooming in, and 's' is like zooming out with respect to the left side-perspective view. 'A' means left 'd' means right for both two sides.

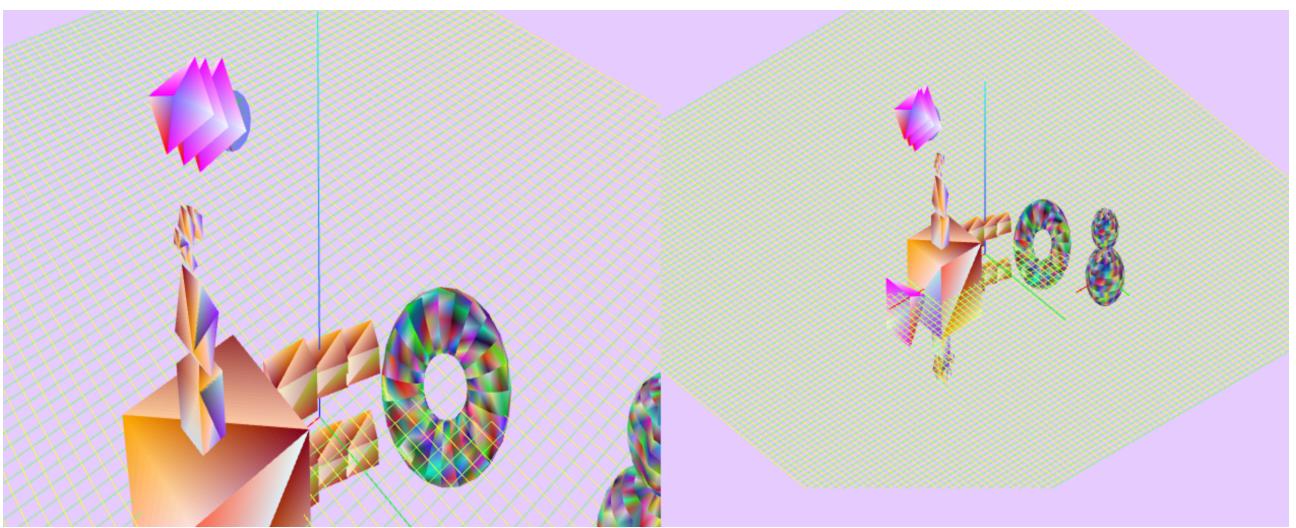


Fig2.Function 1

3) Function 2

Users could press arrow keys to move forward, backward, left, and right.

4) Function 3

Users can use the mouse to drag the snowman by quaternion rotation.

5) Function 4

Users can control the spin speed and direction by clicking on the “spin” and “Run/Stop” buttons.



Fig3.Function 4

Result

In summary, both views can be moved by the keyboard, and the snowman can be dragged by the mouse.

To be more specific, each part of the robot's leg and arm can move at its own angle. As well as each part of the tree.

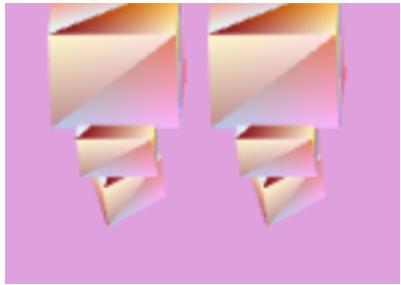


Fig4. Robot's leg.

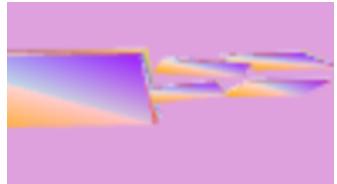


Fig5. Robot's arm

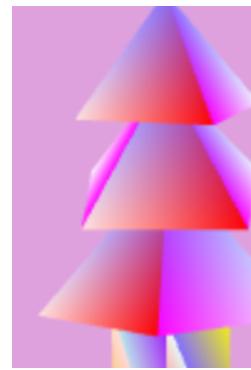


Fig.6 Tree