

Using 3D Modeling to Construct Computer Game Graphics

Objective

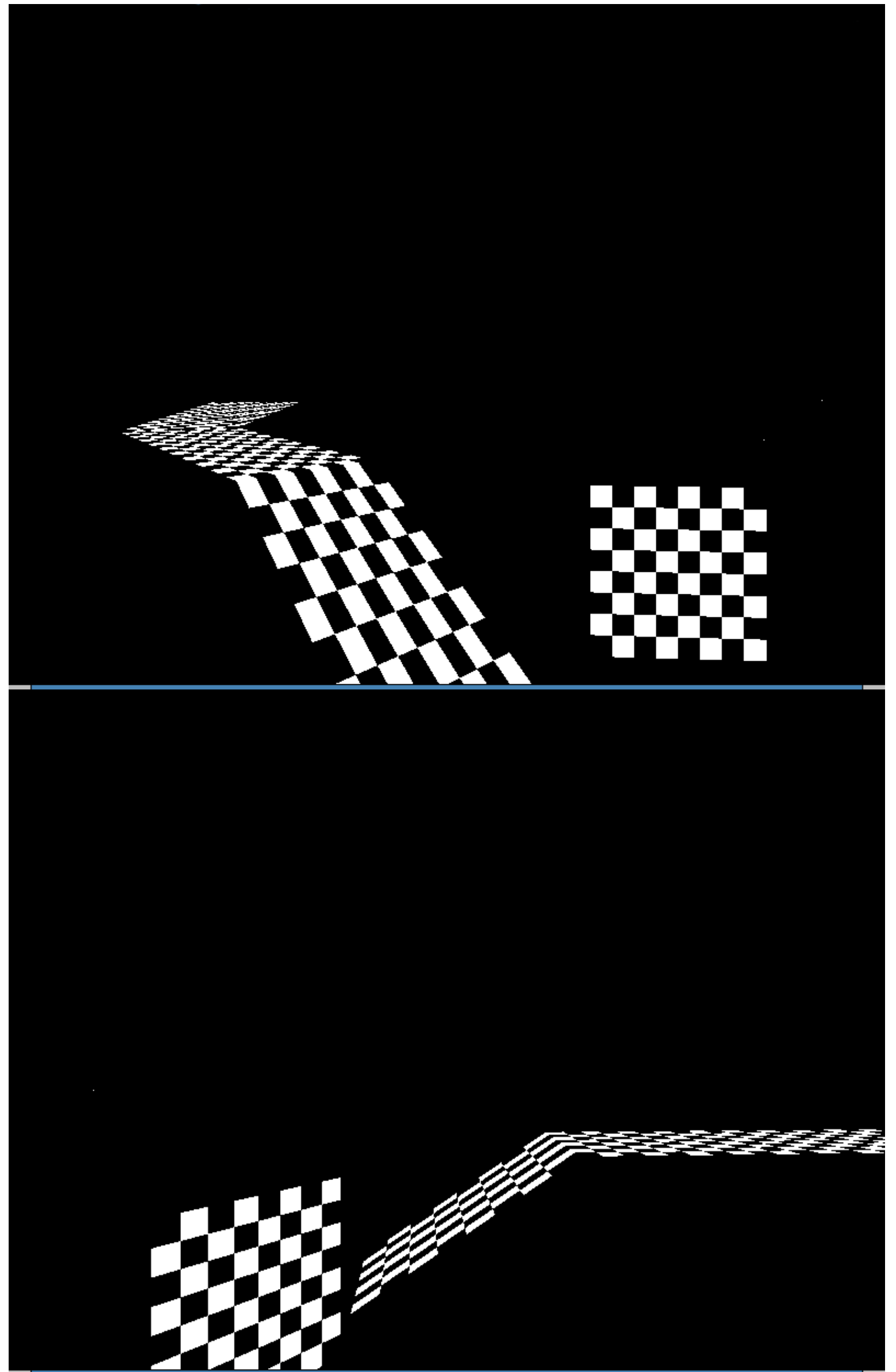
The objective of this project is to design and implement a system to construct 3-D figures for use in a computer game. These figures must be able to both act as objects in space and as a way to render the game's graphics.

Justification

Many real-time computer games now are based on polygons, which are both effective models of spatial relations and relatively easy to convert to a 2-dimensional image with correct perspective, relative size, etc. As graphics are becoming an increasingly important part of computer games, more efficient ways of dealing with complex polygons must be developed to maximize both of these advantages while minimizing difficulties such as object intersections and restrained motion.

Procedure

The procedure of this project mainly involves working with data structures representing polygons. First, the data structure must be created. This must be a structure that is able to use its data with a good degree of efficiency to perform various functions, such as drawing to the screen, calculating intersections between two objects, and allowing for dynamic motion.



Two views of the same polygons.