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CSS450 w/ Kelvin Sung
November 17, 2016

Final Project Proposal

Purpose

The purpose of our project will solely be for entertainment. The user will be able to create stick figure animations, or even movies if they want to.

Overview

The application will have 2 modes, an edit mode and a view mode. In the edit mode, the user will first set up a scene however they like, placing stick figures objects here and there within the canvas. The user will be able to apply animations to the various stick figures, as well as the 3 differnet cameras. Then, the user can “save” that scene (saves the transforms and camera attributes) and create the next scene and save that one too. The user will then be able to go into view mode and play those scenes in chronological order, which will result in an animation.

Work With Graphical Object

The main objects in our application will be StickFigure objects, which will inherit from SceneNode. The entire StickFigure will be a SceneNode, with each successive joint from the main body of the stick figure will be another children SceneNode. There will be 3 generations of SceneNodes total. The parent node will be the center of the stick figure, where the upper and lower abdomen meet; the first generation will be the knees, and neck; the second generation will be the elbows, feet, and top of the head; and finally, the third generation will only consist of the hands.

Ability to Edit Graphical Objects: Select and Modify

The user will be able to scale, rotate, and translate the stick figures. Scaling and translation can be done to the parent scene node. Individual joints of the StickFigure can be rotated to represent various behaviors, such as running, jumping, walking, etc. The user will also be able to move the position and scale of the three cameras. All of these modifications to objects can be saved into a “scene” as described above.

Three Different Views

Our application will have 3 different views. One large view and 2 smaller views. The large view will be used to display the overall scene. The small views can be used to “dramatize” a particular area of the scene. For example, each small view may zoom in on two stick figure, to represent them having a dialogue. The main view can at the same time display nothing, to put the focus on the 2 stick figures aforementioned. Views can be activated or deactivated (by simply placing the World Coordinate position where no objects are) depending on what the users want to emphasize in a scene.

Direct Manipulation in the World

All 3 viewport world coordinate position and width can be modified. However, the viewports position will be static. When the user wants to modify a particular viewport’s attributes, they can simply click within the bounds of the viewport and the application will highlight that viewport to signify the current viewport being modified. By pressing the plus and minus keyboard, they can

adjust the world coordinate width. By pressing the arrow keys, they can adjust the world coordinate position. How fun the animation is will depend on how effectively the users change these settings when saving a scene.

Layout Sketch