User Manual for Graphics Application

To start the program, make sure that the following files are all in the same directory:

finalProject.html

finalProject.js

MV.js

webgl-utils.js

InitShaders.js

You will need to extract the files from their compressed archive and place them in their own directory. I've tested it, and it will not work if you double click on the HTML in the archive. Then, double-click on “finalProject.html”. The program will tell you if your browser can't handle the functionality of the program.

To pan around the image, you press the arrow keys. Note that if you pan too far, the image will disappear. If it does, simply pan in the other direction. You can pan in four directions.

To change perspectives, use the buttons on the top of the page. There are 7 perspectives to choose from. Note that the floor texture will not be visible from four of them.

To orbit around the image, tap the “Orbit Y” button.

Press the 'z' key to zoom in. The 'x' key zooms out.

There are two animations that can be performed. Firstly, you can make the box in the centre of the image perform an aerobatic maneuver called the “Barrel Roll.” It is an evasive maneuver used by fighter aircraft when an enemy is close behind them. It causes the aircraft in front to turn upward, bank (roll and turn at the same time) to the side, then continue the same banking movement until the aircraft returns to the original altitude and heading. It would have moved in a kind of spiral path. Click the “start barrel roll” button to see the first half of the maneuver, then click the button again to see the second half. The only inconsistency is that in real life, the craft would return to its original orientation coming from the direction it went in. But in my animation, the craft is returning from the wrong direction.

The other animation is simpler. It moves the pyramid in a counter clockwise direction (from the front perspective) each time you click it. Simply click the “Move Pyramid” button to make it inch along that counter-clockwise path.

Important note: the image used on the floor of the scene is copyrighted. It is from the 1990 film, “A Man Called Sarge”. I do not own it. I couldn't find the copyright owner on Internet Movie Database, but I can tell you it's not me.

This project meats every requirement except for texture-mapped background, animated character and object selection.