Homework #4

Specifications:

Using the X-Programming language, and the related code fragments given to you in lecture, write an application which behaves as follows:

A cube that exists in 3D space should be projected onto the screen. You may use a fixed, pre-defined location and dimensionality, as well as a predefined projection point. The program should respond to user input as follows:

1) When the user presses the 'X' key, the cube should rotate 10 degrees about the X axis, using its centroid as the pivot point. Each successive press of this key should increment it's rotation about that axis by 10 additional degrees.

2) When the user presses the 'Y' key, the cube should rotate 10 degrees about the Y axis, using its centroid as the pivot point. Each successive press of this key should increment it's rotation about that axis by 10 additional degrees.

3) When the user presses the 'Z' key, the cube should rotate 10 degrees about the Z axis, using its centroid as the pivot point. Each successive press of this key should increment it's rotation about that axis by 10 additional degrees.

4) When the user presses the 'V' key, the projection point should change by +1 unit in the Z axis direction. The 'v' (lowercase) should similarly decrement the distance by the same amount.

What you should hand in:

1) A printout of your source code
2) A typewritten 1-2 page writeup describing how you approached the problem, the functions in your code and an overall narrative of the functionality of your program and how it solves the stated problem.

You will be required to demonstrate the successful compiling of your program, as well as a demo.

Due date:

November 2, 2001, BEFORE class.