CHAPTER 4

IMPLEMENTATION

4.1 Module Description

Choose( ):

This function gives a switch case to choose from different menu options. Choosing case 2 (Level 1) calls the function Display1( ) and choosing case 3 (Level 2) calls Display2( ). Choosing quit case 1 will exit from the game at any point in the game.

Display( ):

sets the background colour and clears the color buffer bit, and depth buffer bit (for hidden surface removal and Z buffer test), and it is called from the main()

Display1():

- It plays the Level 1 of the game. It initially sets the the red ball to a position given by 'up' variable, and using the Translatef() function it displaces only the y-coordinate of the ball upwards
- glutSolidSphere() renders a 3D sphere with radius, slices and stack as parameters.
- While the 'f' key is pressed, the function creates an arrow head, and associates a variable 'pos' with it, to translate the arrow towards the right in a single direction. This variable is incremented continually everytime and called with the Translatef() to redraw the arrow at new positions.
- If the condition for bounds satisfy, that means collision has occurred, and counter1 is incremented to register a hit. The flag 'bang' is set to 1, so that when encountered during the next iteration the following changes can take place: position of sphere is reset to 0, bang is reset to 0 (to prepare for next hit), position of arrow is reset.
- 'up' variable is continually incremented to keep the ball moving upwards for a large number of iterations by calling glutPostRedisplay() everytime. It marks the normal plane of current window as needing to be redisplayed with the same specifications.
- The counter1 value is checked for every iteration. Once it has reached a value of 3, Display2() is called to play Level 2 of the game.