

Changes

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Abstract

This document enumerates the changes with respect to the previous design document. It is segregated by section.

1 Threading :

Earlier the implementation followed a barrier synchronization model. We have modified it to now use a One-to-One Synchronization model. This was done using a message queue, which we have called mailBox.

2 User Interface :

Apart from the key-mappings that were intended, we have provided the ability to zoom within certain limits. We have also implemented a Graphical User Interface, using the GLUI library. The GLUI allows you to control the physical parameters, rotation, fullscreen mode. The GLUI window is available only in the windowed mode.

3 Physics Used :

Support for gravity along the Y-axis was provided. The value of Coefficient of restitution (initially set to 1 for completely elastic collisions) can be changed to a value between 0 and 1 to simulate collisions that are closer to the real-life model.

4 Graphics :

A background has been provided. The background is a texture which is loaded using SDL and other functions provided by glut. The table/cube is drawn as a wire frame. The balls have lighting effects.

5 Project Structure :

There have been revamps in our project structure. Comments describing the role of the functions and variables were written, modularity was incorporated and object oriented programming paradigms were embodied.