**Final Project Proposal**

**Project Members:** Osman Kaan Demiröz

**Project Name:** 3D Brick Breaker

**Purpose:** To use computer graphics knowledge gained through OpenGL and combine it with the Object Oriented Programming concepts of Java3D to create an interactive and entertaining 3D Game.

**Description:** Brick Breaker is a very simple and old game in which the user tries to “break” all the “bricks” in the level by bouncing a ball on a small rectangular surface and hitting the bricks. The level is constrained by walls and there exist many different types of bricks. According to the type of brick, it may interact differently with the ball, or destroyed bricks may generate bonuses.

This project focuses on object oriented programming since there need to be many instances of the same “object”, which can detect interactions with each other or with other objects.

The project is also a good opportunity to put lighting options into practice since good visuals can be achieved by creating good lighting effects. Such effects could be for earning certain bonuses or clearing a certain portion of bricks from the map.

The game does not necessarily have a picking mechanism, however user interaction is essential, as the rectangular “tray” will follow the user’s mouse at all times. There also need to be keyboard methods for interface related functionalities.

Once the main structure and the skeleton is complete, I will try to work on handling multiple levels