



TRIBHUVAN UNIVERSITY INSTITUTE OF ENGINEERING PULCHOWK CAMPUS



A Project Proposal for Balance Ball 3D

Submitted to:

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➤ Title: Balance Ball 3D

➤ Description:

Balance Ball 3D is a computer graphics project that aims to develop an engaging and visually captivating game experience. The game revolves around controlling a virtual ball through intricate 3D mazes, with the objective of maintaining balance and reaching the finish line in the shortest time possible.

The project will use realistic 3D simulations with transformation concepts and visually appealing graphics. Accurate physics models will govern the movement and behavior of the ball, adding a lifelike feel to the game. Players will face diverse challenges, including navigating through obstacles, ramps, and platforms, requiring precision and strategy to overcome. Moving platforms, rotating structures, narrow passages, and traps will test players' skills and control over the ball's movement.

A timer mechanism will introduce a time-based challenge, encouraging players to complete levels quickly and adding a competitive element to the game encouraging players to complete each level as quickly as possible. It will create a sense of urgency, motivating players to improve their speed and compete for the best completion times.

In summary, Balance Ball 3D aims to develop the concepts of 3D transformation like translation, scaling, shearing, rotation and many more that we are taught in computer graphics. With diverse mazes, interactive obstacles, and a time-based challenge, players will be engaged in an exciting journey to master the art of balancing the ball.

➤ Library to be used: OpenGL