Problem Statement and Goals

Physics Game - Collisions and Gravity

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Table 1: Revision History

Date	Developer(s)	Change
2024-01-26	[Al Jubair Hossain]	Initial Draft

1 Problem Statement

1.1 Problem

This project aims to develop a physics-based gaming application focusing on realistic collision dynamics and gravitational interactions. The game will be developed in C++/C# or JavaScript, providing an engaging and interactive environment for players to explore physics concepts.

1.2 Inputs and Outputs

1.2.1 Gameplay Dynamics

Input: Player interactions through controls. **Output**: Real-time response in game physics and mechanics.

1.2.2 Physics Simulation

Input: Environmental parameters, object properties. **Output**: Realistic object movements and interactions.

1.3 Stakeholders

The primary stakeholders are the game developers, players, and the educational community that may use the game as a teaching tool.

2 Goals

- Develop an interactive game with realistic physics.
- Create engaging content that educates players about physics.

3 Stretch Goals

- Include advanced physics concepts like fluid dynamics.
- Implement a level editor for custom gameplay experiences.