

Bullet Blitz

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ABSTRACT

Bullet Blitz is a multiplayer first-person shooter (FPS) game based on classical shooters from the past. In the game, players will assume the roles of intelligent rodents armed with an array of weapons. This project is built on Unreal Engine 5 while using assets made from Blender and Ultimate Doom Builder. Bullet Blitz is meant to engage players in a fast paced FPS game with a emphasis on fast movement to keep players in fights with minimal downtime. Players will fight each other or AI enemies on different kinds of maps, find weapons, and eliminate other opponents to score points.

Bullet Blitz has networking capabilities for multiplayer interactions, reliable damage handling, Artificial Intelligence enemies, and efficient spawning systems to keep the action flowing smoothly. Beyond the core gameplay elements, Bullet Blitz features a retro shooter aesthetic with rodent-themed player models and unique UI elements. Multiple kinds of maps will be available to play on, as well as various environments in those maps that require the player to use the movement systems in order to gain an advantage over other players. The weapons are balanced into two groups, primaries and power weapons. While primaries are common and the player can equip two, power weapons are much stronger, but are combined with the map's environment, making them only accessible via the movement system. Each weapon is also given a different respawn time, encouraging players to continue to use the movement and keep up their momentum so they can reach weapons before their opponents.

Author Keywords

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1. INTRODUCTION

Bullet Blitz is a multiplayer first person shooter (FPS) game project made with Unreal Engine 5. The game is an arena shooter where all of the players are placed in an arena as rodents going around jumping around the maps at high speeds and shooting at each other with different unique weapons that spawn around the map. The core gameplay and idea for the game was inspired by many classic arena shooters, but the main influence was from Quake.

The Developers of the game are: Victor Gasior, Blade Johnson, Andrew Newbill, and Lucky Woods. We have put our focus into making sure the game runs as smoothly as possible and put in as much as possible to make it like many classical arena shooters of the past. The game is separated into four important categories of focus: core gameplay, networking, Artificial Intelligence (AI), and User Interface design along with customizable settings. Gameplay will go over core concepts

of the game such as weapons, movement, and map design. Networking will go over how the players will be able to play together. Artificial Intelligence part of the paper will go over how the enemy AI's will be controlled to act similarly to a player. User Interface will go over the interface the players will be seeing constantly along with settings for a player to have their own preferred play style.

2. TECHNOLOGY

For Bullet Blitz, Unreal Engine 5 (UE5) was used for the creation of the main game. Main parts made from UE5 were: base game play movement, animations, networking, and AI. Networking is done so players from different devices can play the game at the same time for the normal PvP experience. Animations were done for the reloading and firing of the weapons to make each one seem different from the rest with unique styles. AI was put into the game as to have players be able to fill in spaces for if there are not enough players for a match.

Ultimate Doom Builder (UDB) was used as the main platform to create the maps for the game as it is a program for making FPS maps. The main hurdles were importing maps from UDB to UE5, but there are platforms out there to help with the importing of the files. The system was used as it is an easy way to make maps instead of spending multiple hours on end to make different maps on Unreal Engine

Blender and Maya were both used as a 3D modeling platform for making the weapons of the game and the player models respectively as they both allows users to create different forms of items on there. Blender was also used to help import the maps from UDB to UE5 with a much more seamless transition.

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Unreal[?] Ultimate Doom Builder.[?] Blender[?] Maya.[?]