

Minigame Mayhem

A Collection of Competitive Minigames

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Game Overview

The Concept

Minigame Mayhem seeks to be reaction based and adrenaline-fueled minigame collection featuring five distinct competitive challenges. Each minigame tests different player skills—from precision aiming to split-second reflexes, to maneuvering a packed environment.

Core Objective

Race through all five unique challenges, master their mechanics, and compete for the best completion time and highest overall score. Every minigame offers a fresh challenge with its own win conditions.

Gameplay Concept



Main Menu

Select your challenge and review leaderboards



Random Minigame

You're immediately dropped into a random minigame with the order predetermined.



Gameplay

Complete the challenge using unique mechanics



Results

View stats and compare performance

Replayability Design

Each minigame features score tracking, time trials, and escalating difficulty that encourages players to refine their strategies and improve their performance across multiple sessions.

Development Highlights

The project showcases advanced Unity development techniques with custom systems built from scratch to manage diverse gameplay mechanics.



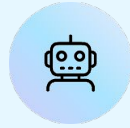
Minigame Manager

Centralized system controlling game state transitions, score tracking, and seamless switching between different minigame scenes



Multiple Controllers

Five control schemes including FPS shooter mechanics, third-person movement, and reaction-based input systems



NPC AI Scripts

Intelligent enemy behaviors featuring nav-mashes, reaction timers, and target identification logic



Polish & Effects

Wide usage of character models and environment details to flesh out the play space.

Block the Shot



Gameplay Mechanics

Simple Ball Physics: Randomized spawn positions and velocity vectors create unpredictable trajectories

Blocker Movement: Simple left-right controls

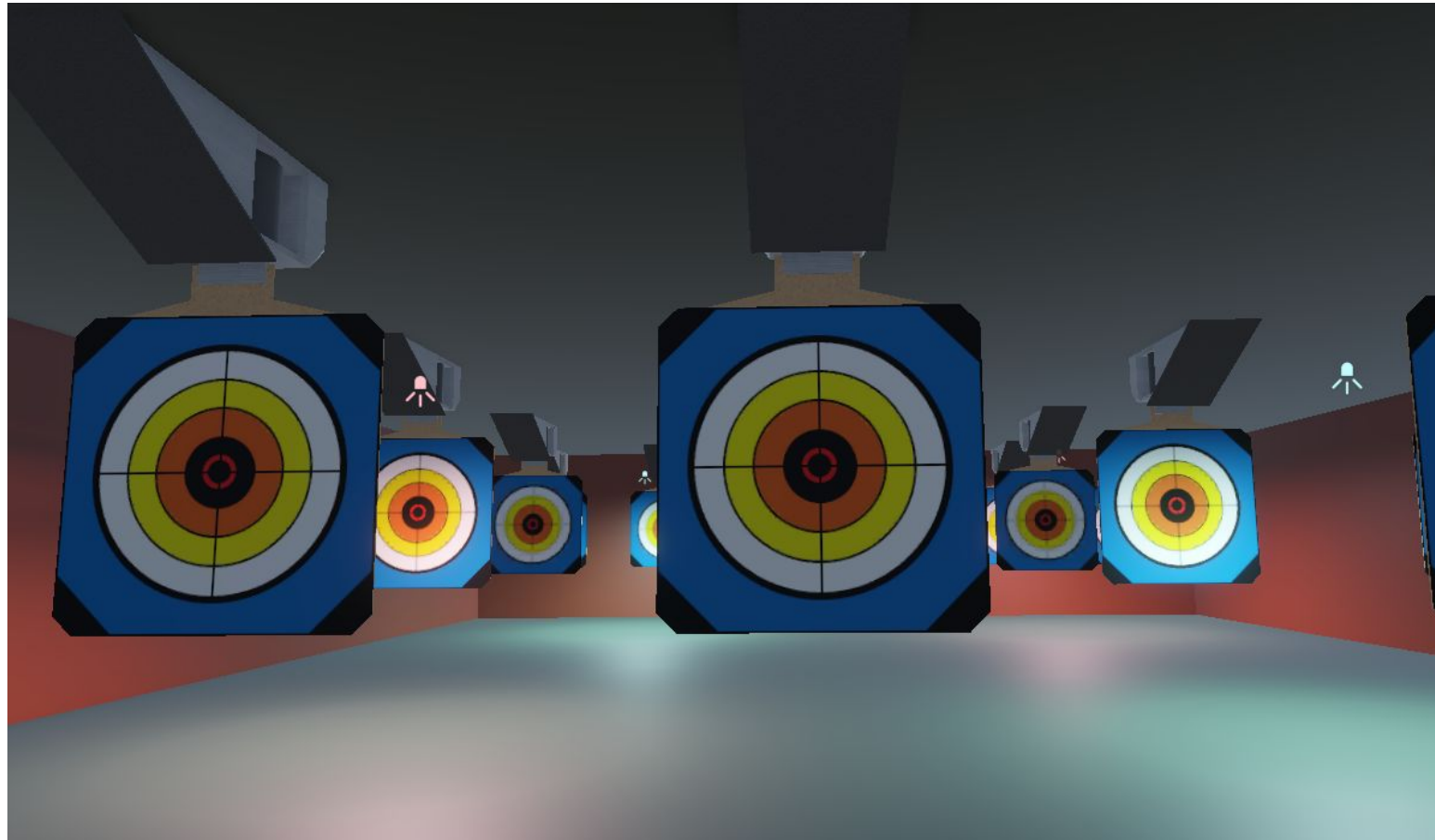
Custom Scripts

BallSpawner.cs - Manages ball instantiation with timing variations

BlockerController.cs - Handles player input and blocker positioning

GoalDetector.cs - Scores successful blocks and tracks failures

Shoot All Targets



Core Systems

Timed Challenge: Shoot the targets before the time expires.

Target Spawning: Preset targets chosen at random with a variance of quantity.

Hit Detection: Raycast shooting mechanics that trigger target animation.

Player Controller Spotlight

Implemented a FPS control scheme featuring mouse-look camera, WASD movement, and crosshair.



Snipe Your Target

NPC Identification Logic

Each NPC spawns with randomized attributes. The system selects one as the target and displays distinctive visual markers, clothing color, accessory items, or highlighted outlines, while all other NPCs serve as decoys.

Sniper Mechanics

Zoomed scope view. Players must identify the correct target among moving NPCs within a time limit, adding pressure to visual scanning.

Win/Loss Conditions

Shooting the correct target ends the round with victory. Hitting a decoy or running out of time results in immediate failure. Accuracy and speed determine final scoring.

Dodge the Killer

Killer AI Behavior

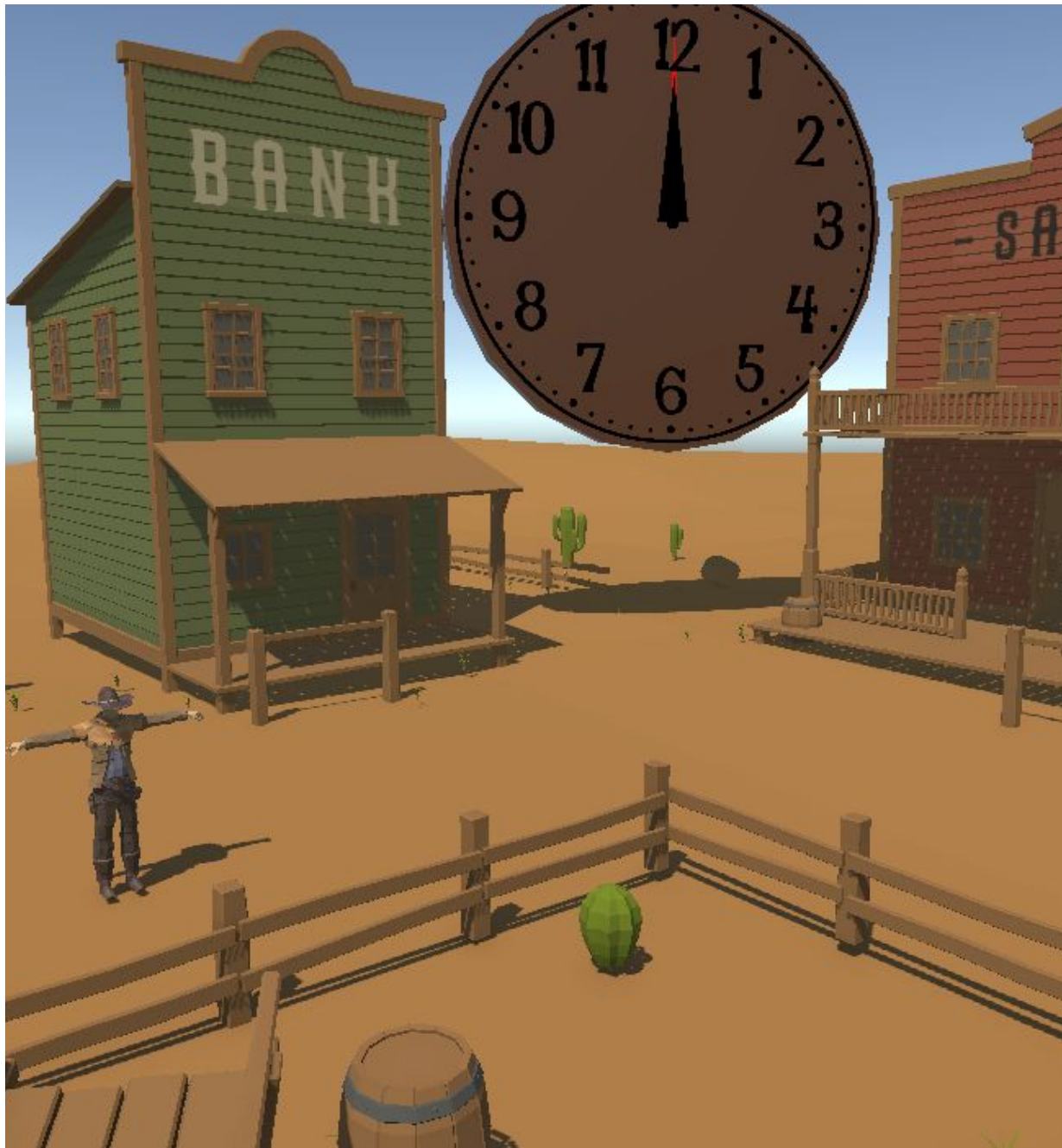
The enemy uses Unity's NavMesh pathfinding to track and pursue the player through the arena. Dynamic obstacle avoidance and speed ramping create escalating tension as the chase intensifies.

Player Movement System

First-person controls with sprint stamina management, dodge rolling mechanics, and tight collision detection. Players must navigate the environment while maintaining visual contact with their pursuer.

Survival Challenge: Last as long as possible while the killer's speed progressively increases every 10 seconds.





High Noon

- 1 Tension Phase**
Players face off with visual countdown building suspense
- 2 Draw Signal**
Random timer triggers—both players can now fire
- 3 Reaction Window**
First accurate shot wins the duel instantly
- 4 Victory**
Fastest reaction time claims the round

Reaction Timer Mechanic

Measures input delay from draw signal to trigger pull with millisecond precision, rewarding lightning-fast reflexes.

AI Draw Speed Logic

Computer opponent's reaction time randomizes within a balanced range, ensuring fair but challenging competition.

Live Demonstration

Let's Play