

Match Pool Game Design Document

Game Overview

Match Pool is a puzzle game that involves matching ball in a pool to gain gold and complete levels.

Gameplay Mechanics

Pool and Balls

The game features an invisible pool where balls randomly drop at regular intervals.

Every t seconds, a numbered and colored ball drops into the pool.

Balls interact with physics and can be matched by the player.

Matching Mechanism

Balls can be matched by the player by collecting them within the pool.

Matching occurs when ball with same color and number collide.

Merged balls transform into a slightly larger ball of the next number.

Each match rewards the player with a certain amount of gold.

Upon reaching a certain number, the ball explodes, yielding more gold.

Ball Drop Interval

Players can use a button to gradually decrease the time interval between ball drops.

Store

Players can unlock different colored balls in the store.

New balls added to the pool are randomly selected from unlocked balls.

Pool Capacity

The pool can hold a maximum number of balls.

Ball production stops when the maximum capacity is reached.

The maximum capacity is calculated to ensure possible matches.

Ball Interaction

Balls must collide at a certain speed to match.

Matched balls slightly move a random position.

Matched balls interact with matchable balls within a certain radius automatically. It works like magnet effect.

Level Design

Levels are defined by duration and maximum ball count.

Remaining time at the end of a level is converted into gold.

Win/Lose Conditions

Win - Match all the balls before the timer runs out.

Fail - Failing to match all the balls within the time.

Juiciness

Ball Physics

Balls bounce when hitting the invisible pool walls or other balls.

Balls exhibit elasticity upon collision.

Selected ball can disperse other balls upon collision within the pool.

Match

A gold rush animation towards the UI gold counter occurs after merging.

The gold counter tweens after gold rush animation occurs.

Particles

Ball match particle

Last number ball explosion particle

Audio and Vibration Feedbacks

Match SFX, Medium vibration

Ball explosion SFX, Hard vibration

Win SFX, Three step vibration

Fail SFX, Three step vibration

Selected ball collision SFX, Low vibration

Purchase SFX, Medium vibration

Gold earned SFX, Low vibration

Unique Selling Point

Game feel

Unique bomb feature for fail condition

New Features (Not Decided)

Bomb

Ball production system can produce bomb in certain possibility.

The bomb drops and the timer count in certain time and explodes.

The balls in the bomb effective radius have explode.

If there are not matchable balls, the ball production system produces balls.

Example Games

[Match Factory](#)

[Match 3D](#)

[Match & Merge 3D](#)

