Piano-Plunk

Culmination Project

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1. Section I - Game Overview

1.1. Game Concept

[Piano-Plunk] is a musical twist on the Atari classic, "Pong" in which players play chords in order to hit the ball back and forth, simultaneously producing a "song"

1.2. Feature Set

2 player rhythm game. Dual piano controller. Create a song while playing a round of ping pong. Playback the song you created

1.3. Genre

Rhythm Game, Multiplayer, Arcade

1.4. Target Audience

All ages, but mostly kids and young adults with an interest in music

1.5. Game Flow Summary

Game flow is thought provoking but straight forward. Players with little to no musical background will be guided by LEDs lighting up keys that they are allowed to press at all given times. Each round flows very rhythmically and has players rely on their opponent in order to maintain rhythm and key.

1.6. Look and Feel

The game will be very colorful and use a minimalist low poly style. All assets will be 3D but played from a birds eye view perspective, almost as if looking into a box.
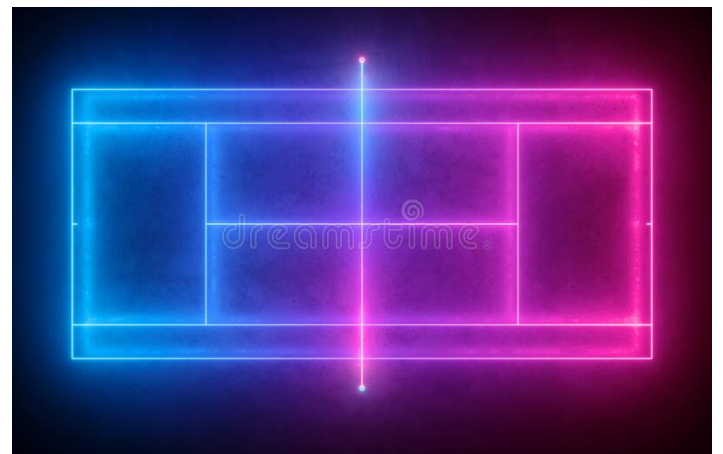
1.7. Project Scope - A summary of the scope of the game.
    1.7.1. Number of Players
       2

    1.7.2. Game Modes
      There will be four game mode:

1. <u>Duo</u>
Each player is given one chord, creating a 2 chord song. This is the easiest game mode and mostly targeted to beginners. (must play triad only)
2. <u>Pop Party</u>
Each player is given two alternating chords, creating a 4 chord song. Following a more pop musical progression this gives players more of a challenge.
3. <u>Stay in Key</u>
Players can play any chord as long as it's part of the key given at the start of the round. Mainly targeted to players with more music theory knowledge. Most challenging of the 4 modes.
4. <u>Jam With Me</u>
Free for all game mode with no key/chord restrictions. The only rule is that at least three keys must be pressed to counter.

    1.7.3. Number of levels
      4 "worlds" all together. As more instruments are introduced the backdrop/court will react and will present more visuals. Percussion will be represented by ribbons. Pads by the "ball" changing color. And harmonies buy the net and bricks strobing.

2. Section II - Gameplay and Mechanics

2.1. Gameplay
    2.1.1. Game Progression
      The level starts with a Spinning Circle of Fifths to determine the key used for the round. After each side will display a slot machine like randomizer to assign the players a chord. Finally, a final spinning wheel will decide which player goes first.

The player who begins can pick the starting inversion of their respected chord. The ball will bounce accordingly. Players will have to play the correct chord inversion that will hit the ball. The longer the game goes the faster the beat will become and the more instruments will play. The round ends when a player misses the ball and/or fails to play a Triad. Once the round ends players can listen back to their creation.
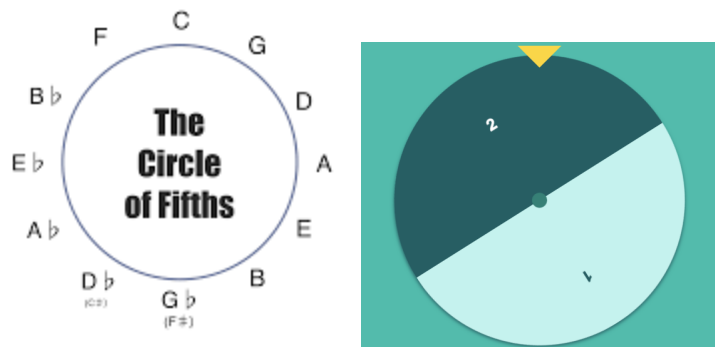
2.1.2. Mission/Challenge Structure

The challenge is to always play a triad. A bar cannot be created if the game doesn't receive three inputs. If a player only plays 1 or 2 keys then the ball would just go off screen, very similar to air hockey. The song would fade out and the keyboard sounds would distort. This is the only challenge required regardless of what game mode is played. The players can play other keys (1 or 2) in addition (more leaning towards the just jam mode) and they will play out loud but it won't count as their turn.