Game Design Document (GDD)

Title

Flappy Prototype

Genre

2D Arcade / Casual Skill Game

Theme & Visual Style

- Theme: Dark, minimal, futuristic

- Color Palette:

    - Yellow bird

    - Black background

    - Purple pipes

- Mood: High-contrast, focused, slightly intense

- Music: *"The Grand Affair – Coupe"* (looped background track)

Game Overview

Flappy Prototype is a 2D arcade-style game built around timing, rhythm, and control. The player controls a bird using a single input to stay airborne while navigating through moving obstacles. The goal is to survive as long as possible and achieve a high score.

This version is intentionally more challenging than the original Flappy Bird, designed at an intermediate difficulty level to reward focus and consistency.

Controls

- Spacebar: Flap / Move Up

- No other controls

Simple input, high skill ceiling.

Core Mechanics

Movement

- Bird is affected by gravity at all times

- Pressing Space applies upward velocity

- Player must balance falling and flapping

Obstacles

- Pipes move from right to left

- Pipe gaps are tighter than the original game

- Speed is slightly higher than the original

Scoring

- Player gains 1 point for every pipe successfully passed

- Score is displayed on screen in real time

Game Over

- Collision with pipe or ground ends the game

- Game Over screen appears

- Player can restart from beginning

Difficulty Design

Difficulty Level: Intermediate

Compared to the original Flappy Bird:

- Slightly faster pipe movement

- Slightly smaller gap between pipes

- Requires more precise timing

The game is not unfair, but it is designed to challenge reaction speed and control mastery.

Audio Design

Background Music:

- Track: *The Grand Affair – Coupe*

- Style: Chill electronic / synth

- Purpose:

    - Matches dark futuristic theme

    - Keeps player engaged without distraction

Sound Effects:

- Flap sound on jump

- Score sound when passing pipes

- Game over sound on collision

User Interface

- Main Gameplay UI:

    - Score displayed clearly at top

- Game Over Screen:

    - Shows game over message

    - Restart button

- UI style matches dark theme with high contrast text

Win & Lose Conditions

Win Condition:

- There is no final "win" — the goal is to achieve the highest possible score

Lose Condition:

- Bird collides with pipes or ground

Customization from Original

This version differs from the original by:

- Dark visual theme

- Purple obstacles and yellow character for contrast

- Intermediate difficulty instead of beginner

- Background music added

- Polished UI and presentation

Development Goals

This prototype was built to demonstrate:

- Physics-based movement

- Collision and trigger systems

- Score tracking and UI updates

- Game state management (play, game over, restart)

- Technical problem solving and debugging

- Iterative improvement through customization