# Project Documentation: Flappy Bird Game

Purpose:

This project aims to create a Python implementation of the classic Flappy Bird game. This project serves as a demonstration of Python programming skills, particularly in game development using the Pygame library. The goal is to provide users an entertaining and interactive experience while showcasing proficiency in game design and development.

Functionality:

The Flappy Bird game features the following functionalities:

Game Mechanics: Users control a bird character by pressing the spacebar to flap its wings, allowing it to navigate through gaps between pipes.

Scoring: Players earn points by successfully passing through each gap between pipes. The score is displayed on the screen during gameplay.

Collision Detection: The game detects collisions between the bird character and pipes. The game ends if the bird collides with a pipe or hits the top or bottom of the screen.

Game Over: Upon collision, the game displays a game over screen with the final score. Users can restart the game by pressing the spacebar.

Graphics and Animation: The game features visually appealing graphics, including background scenery, animated bird movements, and scrolling floor effects.

Usage Instructions:

To play the Flappy Bird game, follow these instructions:

Launching the Game:

Run the Python script flappy_bird.py.


The game window will open, displaying the title screen.

Gameplay:

Press the spacebar to start the game and make the bird flap its wings.

Navigate the bird through the gaps between pipes by timing your jumps carefully.

Earn points for passing through each gap.

Game Over:

The game ends if the bird collides with a pipe or hits the top or bottom of the screen.

The final score is displayed on the game over the screen.

Restarting the Game:

To play again, press the spacebar to restart the game after reaching the game over the screen.

Screenshots:

Figure 1: Flappy Bird Title Screen

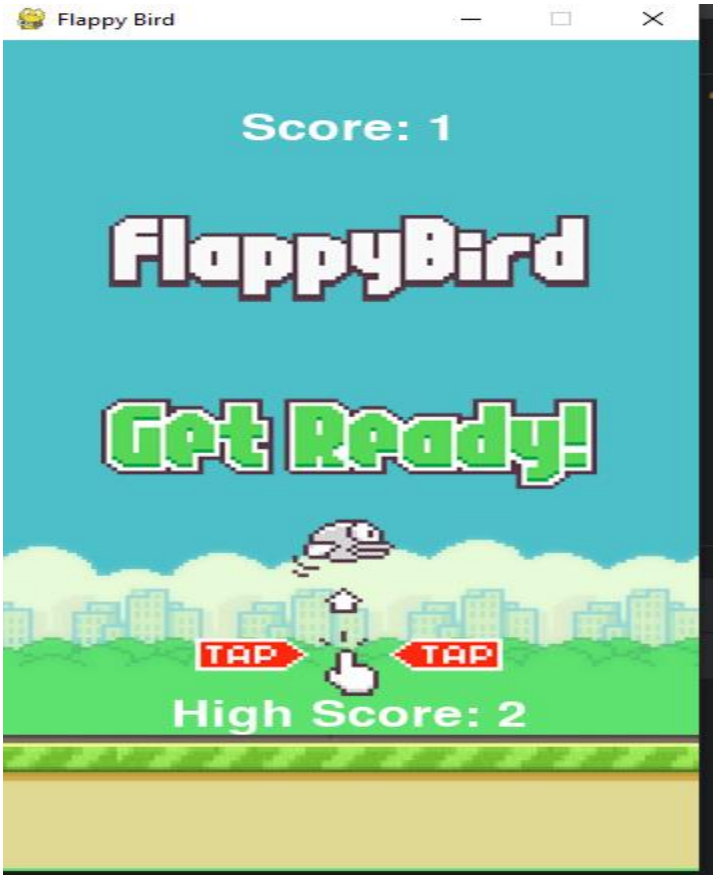


Figure 2: Flappy Bird Gameplay

This documentation provides an overview of the project's purpose, functionality, and usage instructions. Screenshots of the game's output demonstrate its visual appearance, while the included code showcases the implementation details.