Aidan Kuo \ Final Document
Period 2 6/9/23
Group Name: Cracked at Flappy Bird

# Flappy Bird

**Description**: I made the game Flappy Bird in processing. The game also has weather to make it more fun and challenging.

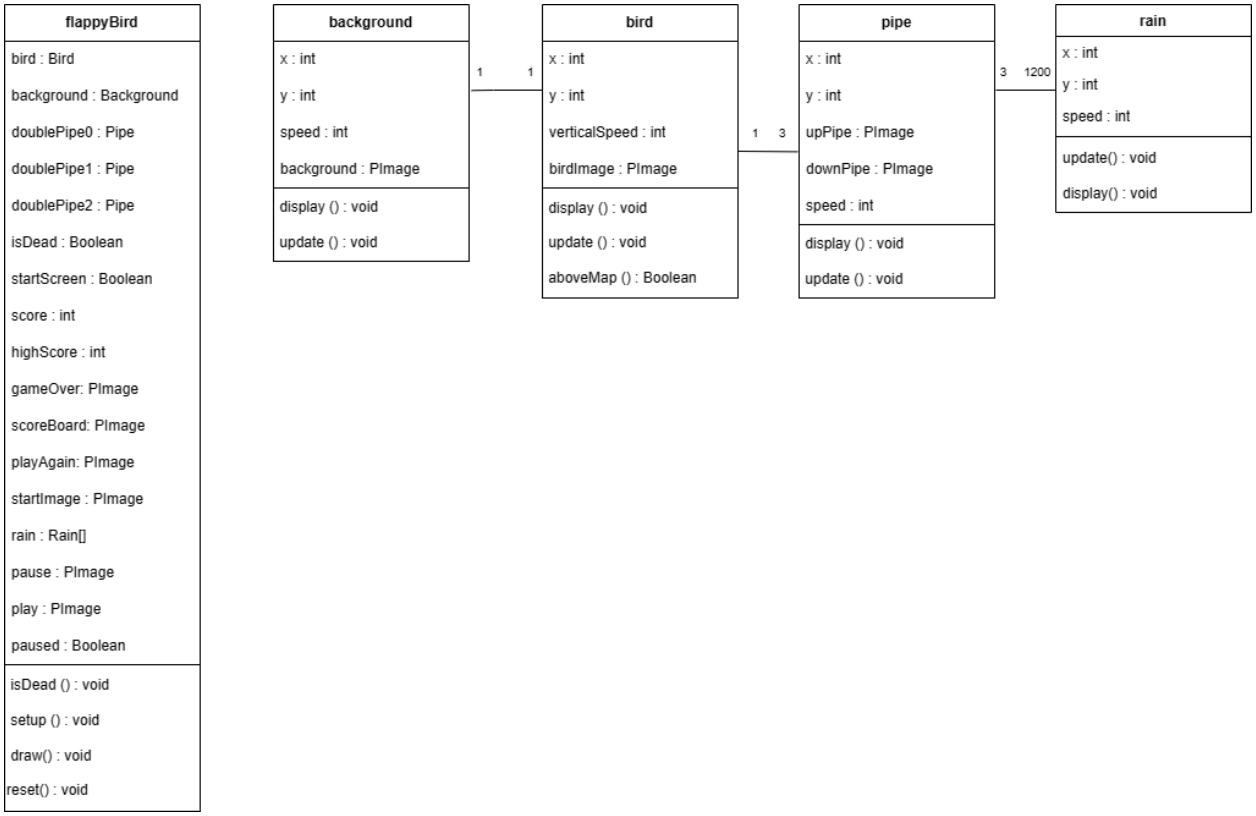
**Functionalities**:

- Has background
- Has bird
- Has pipes
- Background and pipes move
- Game has gravity
- Bird can jump
    - Either by clicking with mouse or tapping space bar
- Bird dies if it touches a pipe
- Has a score counter
- Has a play again screen
- Has rain (turns on when score gets to 5)
- Has start screen
- Has a pause button

**Problems and Solutions**:

- Gravity: Creating gravity was a problem I had and in order to solve it, I had a vertical speed value which decreased by 1 every frame, but became 7 whenever the bird jumped.
- Making the bird die when it hits a pipe: In order to solve this, I used the distance of the bird from the center of the two pipes. In order to find the distance, I used trial and error.
- Making a play again button confused me a bit, but then I realized that a button was basically just a range of coordinates which, if clicked, would cause an action.
- The game is very laggy: I figured out that it was caused by the pipes having decimal coordinates (processing doesn't like working with decimal coordinates)
- Rain: I didn't know how to have lots of rain droplets but eventually I realized that I could use an array.

**UML**:




**How to Play**:

- Objective: Get the highest score possible
- Obstacles: If you hit a pipe or touch the ground you die!
- Controls: Jump by pressing space bar or clicking the screen with your mouse