User Manual - Flappy Bison
Team 8: King's Queens

General Statement

Flappy Bison is a game that challenges players to navigate a bison through a series of obstacles by flapping its tail to gain altitude. The objective of the game is to successfully pass through as many pipe obstacles as possible, is to have the bison flap its tail to gain altitude in order to pass through the pipe obstacles successfully. Although it may seem like a very simple game to create, there were a lot of factors and questions to consider– How do we make the bison flap just on one click? Or do we just move it via our mouse cursor? Do we apply gravity on the bison? How do we have the pipes move? Does the bison just move along the y-axis while the pipes move along the x-axis? Point handling? If we were to count points, how would we handle collisions?

Introduction

As stated from the general statement, there were a lot of questions to consider when coding this game in regards to how to create a game that uses the same simple mechanics as the original Flappy Bird but with our own graphics. One of the most important things we wanted to address through this project was our ability to apply and refine our skills in OOAD. During class, we spent a good amount of time exploring the different features that JavaFX has with the lab assignments we were given. As a team, we wanted to use the knowledge we gained from these labs as a foundation for our game. At the beginning of the project, even before the first Sprint, we thought long and hard about a project that would force us to use our JavaFX skills and force us to go outside of our knowledge from the course and look into features that could further advance our concept. While trying to learn new concepts and combining it with our equipped skills, we also wanted to do it in a healthy way where every sprint can be balanced and be ready by the due date. Essentially, we want to practice agile coding and scrum.
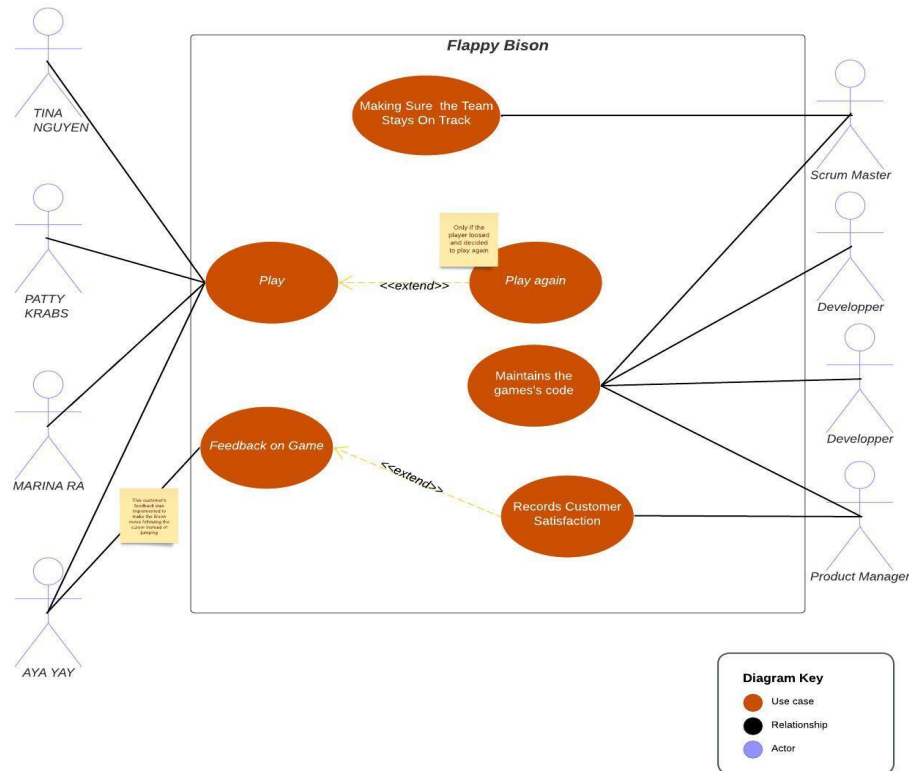
In regards to the decision of graphics, we wanted to do a pixelated version of the Last Airbender since it looks less tacky that way, but it also aligned with one of our User Personas, Angel Enheven, who loves graphics and a good color palette.

Since in the original version of Flappy Bird where you have to press something to make the bird flap, it had made several users angry at the creator of the game that he eventually had to delete the app. One of our personas and main players of our game, as shown below in our User Case Diagram, Aya Yay, happens to be one of the easily irritated users, so instead of making our Appa flap by one click, we implemented her feedback and made the mouse cursor be Appa where you would have to move your mouse that would move Appa, making it easier for people like Aya Yay.

Our other problem was that if the game were to end, do we want to give the user the option to play it again? Our user persona, Marina Ra, likes to play games over and over again that they do not keep track of. So, we then implemented following Marina's feedback an end page where if the user's bison were to die (from hitting the sides of the screens or collide into the pipes) then they would be prompted to the end page where they can click on the restart button to play it again.

For people that just want something simple in regards to the amount of controls to play but still challenging such as one of our users, Patty Krabs, Flappy Bison is perfect for them. We only allow the player to just move Appa and all the user has to do is move it past the pipes and try to make Appa stay afloat.

Additionally to add more challenging aspects to the simplicity to this game, we decided to make time as part of the challenge since the pipes would be moving at random heights, challenging the player to make a decision of where and when to move Appa to pass through the pipes. Such challenges enhance the user's reaction time, such as our user persona who loves to be challenged on their reaction time, Tina Nguyen.

Flappy Bison

Making Sure the Team Stays On Track

Only if the player loosed and decided to play again

Play ← <<extend>> → Play again

Maintains the games's code

Feedback on Game ← <<extend>> → Records Customer Satisfaction

This customer's feedback was implemented to make the bison move following the cursor instead of jumping.

TINA NGUYEN

PATTY KRABS

MARINA RA

AYA YAY

Scrum Master

Developper

Developper

Product Manager

Diagram Key
- Use case
- Relationship
- Actor

Instructions for Using the Program

1. First, understand that the goal of the game is to use the cursor to move the bison in a way that avoids the pipes that are being randomly generated throughout the game. If the bison collides with a pipe or if the bison is not in the game window, the game will end.

2. At the starting page, read the directions below the title to learn how to control the bison. To begin the game, click the button that says "START."

3. After clicking the start button, the game immediately begins, and the pipes will start to move. To avoid the pipes, carefully move your cursor in between the gaps of the pipes. Continue to do so, until a collision occurs.

4. When a collision occurs, you'll be met with the end page where the only thing on the screen is a button that says "RESTART." If you would like to play another game, press the button. Otherwise, press the red button at the corner of the window to exit out of the program.

5. If you clicked the restart button, you should be taken back to the starting screen. Do your best to get the highest score possible! Come up with strategies to avoid the pipes! You may now return to the first step.