CSE 165 Report

I have chosen to create a video game based on the popular app game, Flappy Bird, using Qt Creator. The game requires the player to control a bird and navigate it through a series of randomly generated pipes. If the player touches any of the pipes, the game ends. To keep the bird flying, the player must tap the screen or click the left button of the mouse. Each time the bird passes through a pipe, the player earns a point, and the score increases. When the game ends, the player sees a game-over screen displaying their score and their best score.

I worked on this project independently and implemented all the features myself. The significant elements of the project included getting the bird to fly by hitting the spacebar or left click, ensuring that the bird falls when the player stops tapping, moving the pipes across the screen, and deleting them once they pass to prevent memory issues. Additionally, the game has startup and end screens, a timer to control the pillars' movement, and freezes everything when the bird collides with a pipe.

I used Object-Oriented Programming (OOP) concepts in my project by creating classes and objects. The bird and pipe classes have their own encapsulation of data and methods. The bird class encapsulates the bird's position, velocity, and gravity, while the pipe class encapsulates the pipe's position and size. Inheritance is also utilized, with the pipe class inheriting from the scene and bird class.