

KHULNA UNIVERSITY

Course Title: Software
Development Project

Course No : CSE 3106

Project Proposal



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Project Title: Flappy Bird Game

Introduction:

Flappy Bird is a popular side-scrolling mobile game first released in 2013. In the game, the player controls a bird and navigates through sets of pipes without hitting them. The game is simple in concept, but challenging in practice, as the player must keep the bird flying by tapping the screen or pressing a key. Each successful pass through a set of pipes results in the player gaining a point, and the game ends if the bird hits a pipe or the ground. The game's addictive nature and simple, yet challenging gameplay have made it a popular choice among casual gamers.

Feature List:

1. Simple Tap-to-fly gameplay
2. Obstacles in the form of pipes that the player must navigate.
3. Scoring system based on the number of pipes successfully passed
4. Increasing difficulty as the player progresses
5. Graphics,

Flappy Bird game full specification:

1. **Gameplay:** The player controls a bird which moves vertically, with the goal of navigating through sets of pipes without hitting them. Each successful pass through a set of pipes results in the player gaining a point. The game ends if the bird hits a pipe or the ground.
2. **User Interface:** The game should have a start screen with a "Play" button and an "Instruction" button. The instruction screen should provide information on how to play the game. The game screen should have a score counter in the upper-left corner, the bird in the center, and the pipes moving from right to left.
3. **Art Assets:** The game should have sprite assets for the bird, background, and pipes. The bird should have animation for flapping wings and falling.
4. **Physics:** The bird should have a velocity and acceleration, subject to gravity. The bird should be able to move upward when the player taps the screen or presses a key.
5. **Collision Detection:** The game should detect collisions between the bird and pipes or between the bird and the ground. The game should end when a collision occurs and show a game over screen with the final score.

6. **Scoring:** The game should have a scoring system that increases the player's score each time the bird successfully passes through a set of pipes.
7. **Difficulty:** The game can gradually increase in difficulty over time by increasing the speed of the pipes and/or adding more pipes.

Tools & technologies:

1. Microsoft Visual Studio.
2. Git & GitHub
3. C/C++
4. Open GL.