

Flappy Bird

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1 Introduction

We Propose a 2D Single-player side-scrolling game. The user interacts with the game using an accelerometer which controls the movement of the bird on screen. The VGA monitor is used to display a background terrain which scrolls with the player progressing through the game. The objective is to direct a flying bird moving continuously to the right between columns of pipe without hitting them. If the accelerometer is not gestured, the bird falls down due to gravity. Player's score is incremented by 1 for each pipe navigated, tracked and displayed in real-time on screen. There are no variation or evolution throughout the game. The game-play ends when the bird hits the column pipes or falls down due to inactivity.

2 Hardware and Software Description

Hardware Components:

- Altera DE1-SoC Board
- VGA Monitor
- Accelerometer

Software Components:

- Game Logic
- Physics Logic

Project Milestones

- Milestone 1: Completion of VGA driver and interface
- Milestone 2: Completion of Accelerometer driver and interface
- Milestone 3: Completion of game and physics logic, testing and debugging