

CS480 Experimental Game Design

Prof. Frank Lee

Group 6:

Jocelyn Ntaba, Gabriel Vizirov, Yichi Zhang

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Design Document: Assignment 1

Overview

The area of childhood this game focuses on is bike riding. The purpose of the game is for a player to make it to the finish line, while avoiding various obstacles that one may encounter riding a bike along the sidewalk. Along with dodging obstacles, players are to maintain. This is a single player game that only requires the keyboard to play.

Game Play and Interface

Players would need the following information to successfully complete the game:

- Players only move on the bottom half of the screen.
- They may move left, right, up or down with the assigned motion keys.
- Players will also use assigned keys to help maintain their balance, shown by a balance meter. If the balance meter moves more in one direction (left or right), the player will begin to move towards the unbalanced direction (e.g. strafe left). Once the needle points to -100 or 100 on the meter, the player falls over.
- Obstacles move towards the player from various directions. These must be avoided until the given time has elapsed, at which point they would have reached their finish line.
- The player's progress through the level is shown to the side of the screen. The timer and number of lives are shown on the top right and left of the screen respectively. The balance bar (shows how stable a player is) is located below the screen. The needle is to be aligned center in order to keep balance.
- As players progress through the levels, the difficulty becomes harder. More obstacles will be added and the speed increased.

Rules

- Player controls the bike (move up, down, left, and right).
- Avoid hitting stationary or getting hit by moving obstacles.
- Avoid getting the balance meter from reaching the edges. (Subtracts a life when get hit)
- Play long enough to reach the goal to win.
- The obstacles were chosen to make the game as realistic as possible.

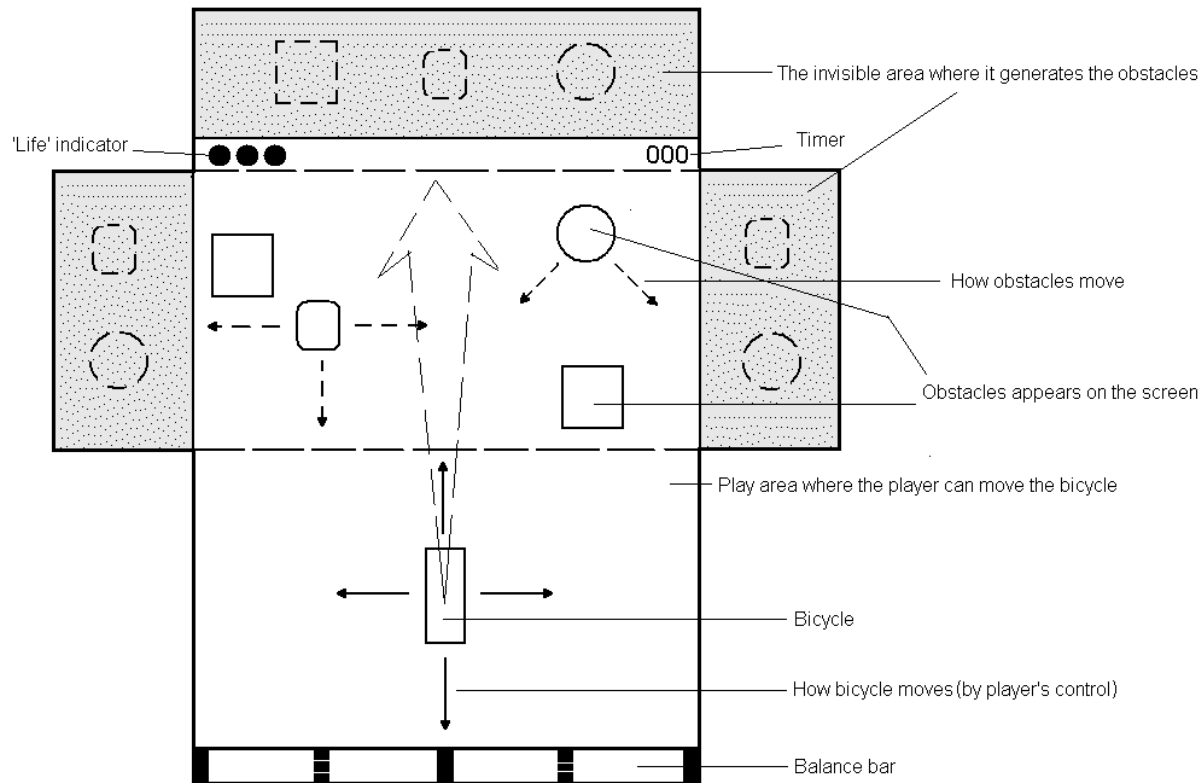
Scoring and Winning Conditions

- There is no scoring scheme.
- If any obstacle hits the player, one life is lost.
- Losing balance and falling over also subtracts a life.
- Winning is accomplished when a player successfully dodges objects all the way to the finish line.

Concept Sketches

As mentioned above, the player is positioned in the lower half of the screen. Obstacles have three different spawn points: upper left, upper right, and top center. Depending on the type of object, they may move either straight down, or in a diagonal motion.

A player has three attempts, indicated as lives and shown on the top left of the screen, to reach his goal and this must be achieved in a certain amount of time, shown on the top right of the player's screen.



Division of Labor

Presently, the tasks have been divided as follows:

Graphics

- Background ~ Yichi
- Obstacles (trash cans, rocks, cats, mailboxes) ~ Yichi
- Visual aides (bars, lives, balance meter) ~ Yichi

Coding

- Bike ~ Gabriel
- Obstacles ~ Jocelyn
- Meters ~ Yichi
- Animation (images) ~ Yichi
- Collision detection ~ Team

Screens

- Welcome ~ Team

- Lose (picture may depend on how collision happened after last life was lost) ~ Team
- Win (one image) ~ Team