University of Washington
CSE 481D: Games Capstone

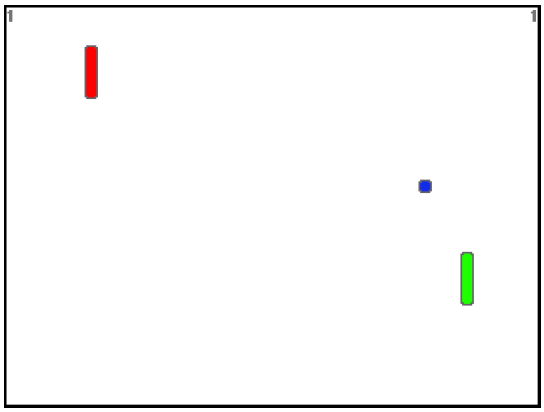
Project 1: Pong

Assigned Date: Tuesday, March 30th
Project Due Date: Tuesday, April 6th, at 11:59:59 pm

Project Description

In this project, you will implement Pong in Flash. The goals of this project are to help you become familiar with Flash and to introduce you to game design through implementation of a classic game.

Required Functionality



Pong is a two-dimensional game played between two players inside a rectangular playing field. One player tries to defend the left side of the rectangle while the other tries to defend the right side. Each player controls a paddle on his or her side of the field that moves up and down. Players use these paddles to deflect a ball that moves around the field. The ball bounces off of the paddles and horizontal walls located at the top and bottom of the field. If a player fails to deflect the ball and the ball gets past the paddle, the other player gains a point and the ball restarts in the middle. The goal is to score the most points.

When the game starts, it should show a menu screen with instructions. On this screen the user should be able to press a button (of your choice) to start the game. The instructions should explain clearly what the input keys are.

When the user presses a button to enter the game, then the game should start.

The playing field should have two rectangular paddles and a circular ball. At a minimum, the ball should loop play the single animation provided with the assets.

One paddle should be controlled using W (up) and S (down), and the other should be controlled using the arrow keys (up and down). They can move at any reasonable speed and should stop if they hit the top or the bottom of the screen.

The ball should start in the middle and can start moving in any direction at a reasonable speed. If the ball hits a wall, then it should bounce off the wall with the same speed at an angle that is the same as the angle of incidence. You have a choice for how the ball

reflects from a paddle. It is fine if the ball simply bounces off the paddle at the same speed as though it were a wall. However, the original creators of Pong did something more complicated: the speed at which the paddle is moving and the relative location along the length of the paddle where the intersection with the ball occurs affect both the angle of reflection and the speed of the reflected ball. You may experiment if you wish, but should not feel obligated to.

There should be a display somewhere on the screen that clearly shows the current score.

A sound should be played when the ball hits a paddle or the wall, and a different sound played when a player gets a point.

After one player has scored 5 points, the game should go to another screen that shows the winner and the final score. From here the users should have the option of restarting the game.

You should implement all of the functionality listed above. We are not concerned with the exact details of your implementation as long as the game is functional and playable.

Getting Started

Slides: http://www.cs.washington.edu/homes/scooper/cse481d/slides-20100330.ppt
Assets (images and sounds): http://www.cs.washington.edu/homes/scooper/cse481d/pong.zip

Turning in the Project

Email your final swf file to the staff mailing list: cse481d-staff@cs.washington.edu

Grading

100% - Implementation meets all requirements.
75% - One or more requirements is missing.
50% - Many requirements are missing.
0% - Nothing turned in.

Collaboration Policy

Since the point of this assignment is to introduce you to Flash, no collaboration is allowed.