

Jailbreak Pong

Group KAZE

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1.0 Current Progress

All demoed content is genuine. Our board view adapts well to screens of different aspect ratios and sizes. It has a fixed number of rows and columns that makes it nearly seamless on 16:9 screens and ensures square sized bricks. On longer screens, the board is vertically centered. This enables two users with different aspect ratio phones to play on the same board.

Our ball object uses dynamic value calculations to help it bounce appropriately on screens of different sizes, in both x and y directions. Its speed and size are all adjustable. To avoid the ball from bouncing on the same path, on each collision, there is some randomization that makes the ball pivot a bit off its expected course.

Our square brick objects can be successfully produced by a brick factory and added to the Game view. They are all drawn exactly where they are expected to be on the board. They each have an opacity value, which will decrease every time they are hit by the ball.

The board view and square brick objects have shaders and colors applied to them that to make them look similar to our split-screen mockup.

1.1 Difficulties

We are not using any game engines like Unity, so we have to create our own custom views and do our own drawing functions using canvases, which is time consuming to learn and polish.

We used to use surface views and surface holders to draw the board and bricks. However, we eventually learned that surface views cause unexpected behavior when layered with other views. Therefore, we have just recently created custom view classes instead. As a result, the ball and paddle objects have not been merged with the board and bricks yet.

1.2 Next Steps

For the next month of development, we are focusing on integrating the Ball implementation with the Board. We will be focusing on structuring the Views in such a way that the Ball View moves on the Board View.

Another big task involves the implementation of hit detection so that the Ball can destroy the Bricks it hits. We are planning on implementing a Health Point property of the Bricks so that they can be hit multiple times. Each hit change the Bricks color.

The final major task is programming the Paddle objects and syncing data across two phones. Paddles can be moved by user touch input across a specified horizontal axis. Wifi Direct connection is being implemented, in an attempt to share Paddle positions between two phones, so that two players can play with each other remotely.

2.0 Architecture Overview

