

# Pong Clone Design Documentation

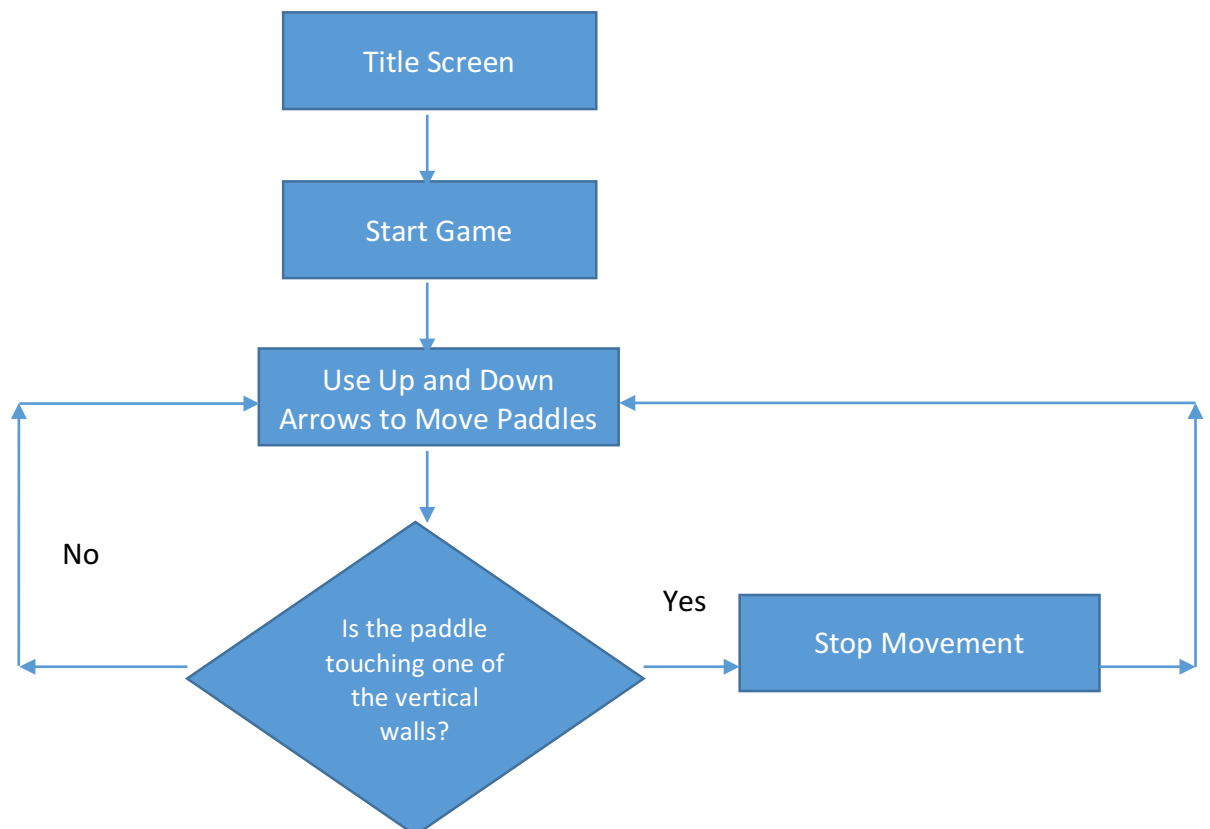
## Target Device

The clone of the popular arcade game, PONG, which will be created as part of understanding how to use the Unity game engine, would eventually be released for desktop computers, with both the Windows and Mac OS's in mind, so as to allow everyone to play the game and that the game itself would be developed using the Mac OS's version of Unity, rather than Windows'.

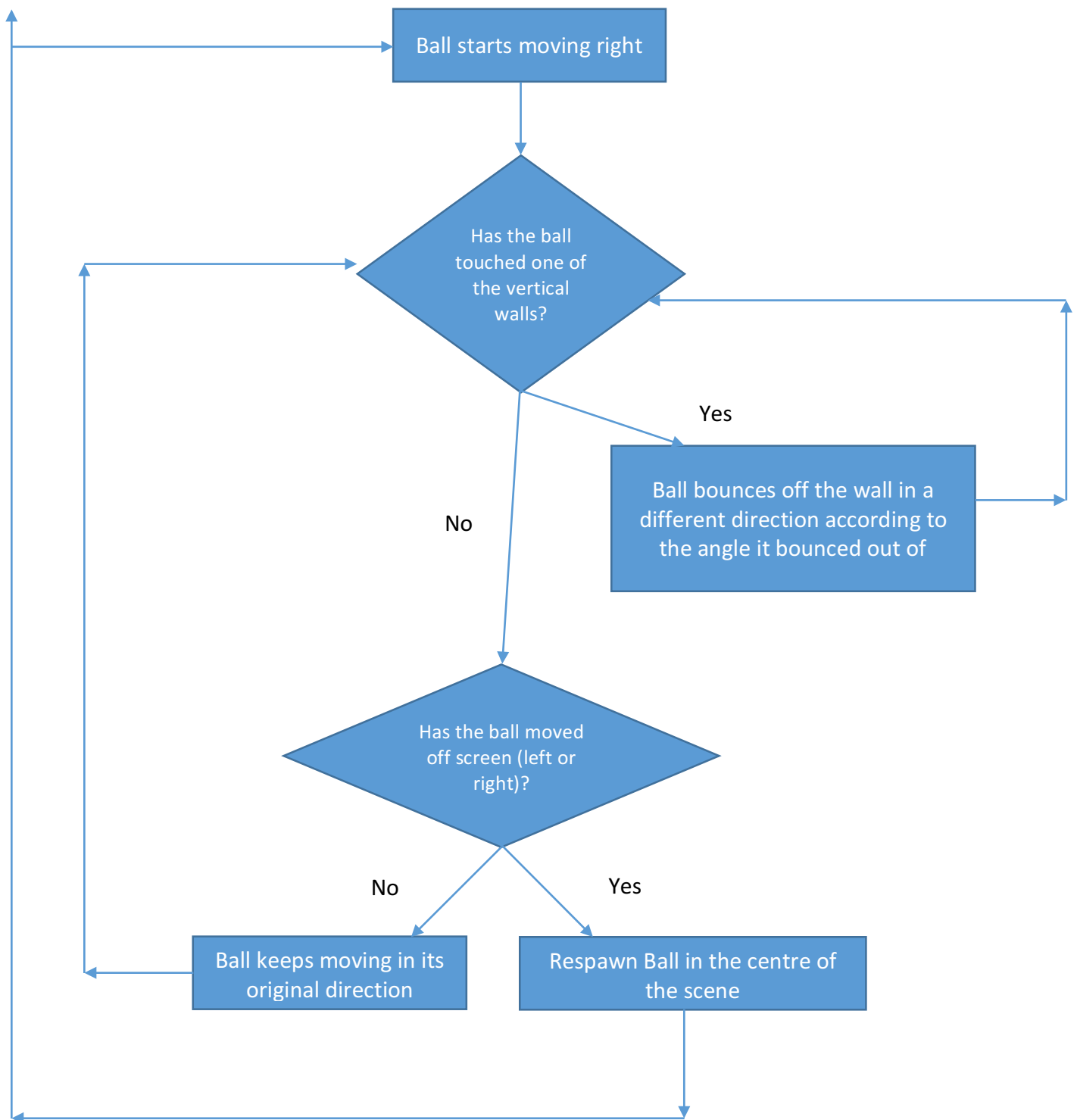
## Game Flow charts

Below one could find some flowcharts for the functionality of various elements in the game. This section would be covering the Paddle and Ball Movements, and the scoring system.

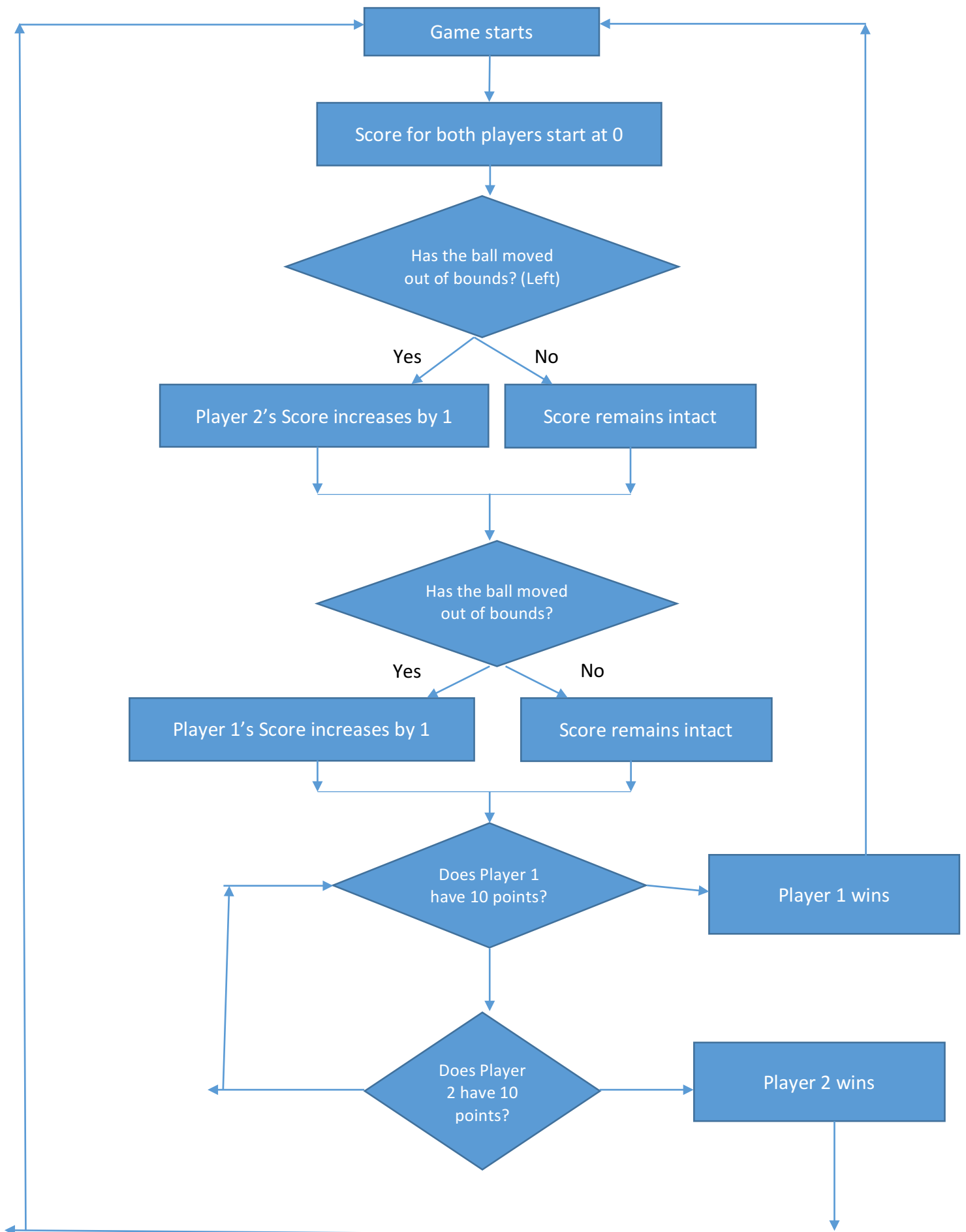
### Starting the game + Paddle Movement



## Ball Movement



## Scoring System



## Game Mechanics

Being a clone of the original Pong, the mechanics would remain the same as the original, where the player would control a paddle where the goal would be to hit a ball which bounces across the screen in order to prevent the opponent from scoring points.

The game will be multiplayer only, where one player controls the left paddle and another controls the right paddle.

## Objectives

The objective of the original Pong was for the players to hit a ball to their opponent using a paddle and should the ball pass by the opponent, the opposing player would score a point. The first player who manages to score a certain amount of points would win the game.

Since Pong is a relatively simple game to code, all the basic mechanics would be left intact for the clone.

## Visual Assets

Pong is not a game which focuses heavily on visuals, making use of a simple black background, 2 white rectangles for the players' paddles and a square for the ball. These visual assets were easily replicated by using Photoshop.

(A black stroke was added so as to make the assets visible in the document)



Figure 1 - Player Paddle

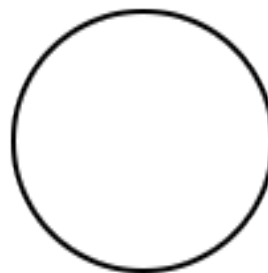
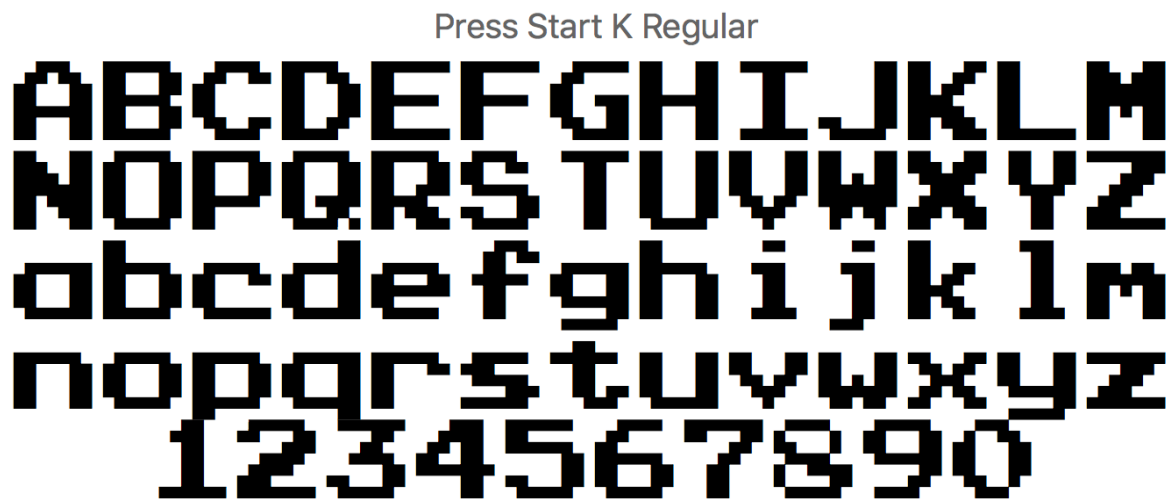


Figure 2 - The Ball

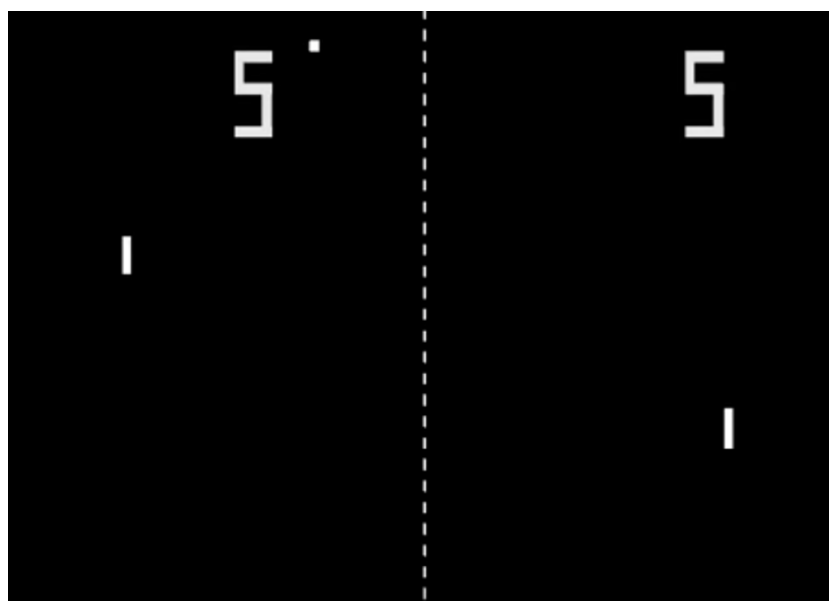
The retro style font 'Press Start K' would be used for all the UI elements due to its 'old-school' style aesthetic, which would blend in well with Pong due to it being a retro-styled video game.



*Figure 3 - Font Family to be used*

## UI Elements

The original game has the player's score in the HUD. The clone would display the game's UI elements in a very similar manner, although, what would change from the original is that once one of the Players would reach the maximum amount of points needed to win, the game would display "PLAYER 1 WINS" or "PLAYER 2 WINS" on a separate screen, whereas in the original game, the player paddles would just disappear.



*Figure 4 - UI/HUD Elements in the original*

## Game Scenes

Pong is a single screen game, as such the main game will make use of one scene consisting of the required game elements.

Apart from that the game would also consist of another two scenes: One of which would show the game's Title Card, which is shown upon booting up the game, and the other two would be for the "PLAYER 1 WINS" or "PLAYER 2 WINS text.