PONG

PRESENTATION OF THE MAIN FEATURES OF OUR GAME

The game is for two players that can move up and down. The left player, -Player 1- can move with W and S. The right player, -Player 2- can move with the up arrow and the down arrow. The game as we also mention in developer's note, tries to maintain the most aspects of the original Pong. It keeps the graphical design simplistic to remind a retro game, but it also holds the gameplay simplicity for the mere reason, we want the game to be similar to the original version. We will make a short review of the things that we implement in our code.

Initially we create the map which is a black screen with a white line drawn in the middle of the canvas. Afterwards, we create the players that are two rectangles and not just two lines, which will be mentioned again later since it adds an interesting flavor to the game. This choice was mostly an accident but it turned out to be a great idea. Moreover, we create the ball that reflects every time there is a collision with a player or a barrier. Finally, we add a font and create the score, which starts over when one of the two players reaches 3 points. Up to this point we have respected the core elements of Pong one hundred percent.

If you show to a 10 year old kid this game and you let the kid play the most probable outcome, would be the kid being bored after 120 seconds. The first thing we did was looking at the game from the gamer's perspective. The game was not very direct because the initialization of the ball had a very small x and a really big y most of the times and that meant that the players had to wait too long to hit the ball. Basically the ball was just bouncing up and down to the parallel to the screen borders and it was really frustrating for the gamer. So we built a random which gives the ball random initializations to the direction of the ball and when the function gets a value that will cause this effect then a new direction is generated.

After this change the game got interesting and more fun. Then, we decided that it would be best if we built some barriers in the middle that would be summoned randomly and give an element of surprise to the game. The randomness of the spawn is restricted, since they should be first of all, inside the map's boundaries and second they should not be too close to a player's side.

Finally, our favorite addition to the game. We thought that the game got quite boring after 10 hits because it was just too easy. So, every 10 hits in total for both players, the speed of the ball is multiplied by 1.5x which adds a really entertaining spirit to the game. In a few seconds an old classic boring game got challenging and fun. We chose to leave the player's speed constant to make it even harder which forces the player after a point to predict where the ball will go next because there won't be enough time to react.

When we reached this point we felt that the game was ready and complete since the additions were more than enough for a retro game. We had some ideas like a red ball that will randomly appear and will count for 2 points but we chose to discard them and let the game be as it was. But, there was a final addition that came out of nowhere and we ended up keeping it since it made the game unique. Since the players are rectangles, they can actually hit it with the smaller side of the rectangle. At first we didn't really think this through and bugs started to appear. The ball was bouncing in a weird way and we had a hard time figuring out why. Then, we realized that these sides of the rectangle were "open" and the ball could enter inside the rectangle and come out on the other side. In the meantime, while it was inside it made many collisions and the ball came out on the other side with a crazy speed. At first we said that maybe we should fix this but the thing is, it was so fun that at the end of the day we kept it. The player can risk a bit to try to make this happen on purpose –which is basically a trick shot- and if done right it is really hard for the other player to respond, because the speed is really fast and the direction is not very clear. The opponent's reaction time is dramatically reduced!

The game was more than complete when this issue was "resolved" and it had something that it did not have before, the ability to gain a skill which will make the player that will conquer it, undefeatable. Lastly, we forwarded the game to family and friends to gather different opinions and bug reports. The only problem that came up was that there was a small chance that a barrier could spawn "over" the ball and then the ball was trapped in it. This was fixed quite easily since we programmed the barrier to disappear when this happens, and move to a new random location. There were no other reported bugs for our game.