Project Summary:	Street Fighter: Circle Edition Group 07	
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Our project is named Street Fighter: Circle Edition. Our idea started with a top-down POV battle royale style game. We wanted to include unique characters, items, online multiplayer, and more. We created very lofty goals, many of which we were not able to implement. However, we made the most of our situation and put together a functioning game that is fun and competitive.

We started simple, by creating a single character that could move on the screen. At the time it was a temporary circle, but we eventually decided to keep the design to follow the minimal aesthetic of the game. We used the Player class we created for the first character to create a second character, although we realized we would have to add to our move method to allow for separate movement. We quickly realized that it would be difficult to add more than two players, so we settled for making it a 2 player, 1v1 game. While preventing the characters from leaving the game window was simple, we struggled to prevent the players from overlapping. Creating individual hitboxes, we were able to make the players bounce off each other, but the opportunity for glitches prompted us to change methods to prevent the character from moving in the direction of contact. To fix this issue, we used the corners of the hitboxes and checked if they were overlapping the other player's hitbox.

After player collision was implemented, we moved on to adding the melee attack. Initially, each player had a hammer that was used to attack the other player, however, the hitbox

of the hammer made it complicated to have accurate hit detection. Instead, we created a melee attack that radiated concentrically with the player to have a full 360-degree attack. After we created the ability for a player to attack, we needed to add the ability for each player to take damage. We drew a health bar and decreased its size as the player took damage. At this point, our game was a playable, melee-only game.

Our biggest challenge came in trying to implement walls. As opposed to the game window, which has set positions, we wished to make it possible to make many small walls that we could place next to each other so that we could build a complex map. We attempted to instantiate the wall objects using iteration, then iterate through each wall object to check if it was colliding with a player. However, this proved to be inconsistent, as the iteration itself caused false positives and negatives for collisions. After struggling with implementing the walls, we decided to remove the walls and instead focus on long-range attacks.

To implement a long-range attack, we used an image of a gun and had it inherit the position of each player. Then, when the player turned a certain direction, we had the image flip to the other side of the player to indicate the direction the player was traveling. We then added the ability to shoot by creating bullet objects each time the player would press a certain key and had them travel in the direction that the player was traveling in. We then added the ability to take damage from that attack using the same code from the melee attack.

Finishing off, we added an end game screen as well as the ability to quickly restart. Also, we added basic player instructions to make the game easier to understand when first playing. The game ended up being a fun, competitive, player versus player fighter in which anyone can learn quickly. While we were unable to fully add in all of our goals, we still created a final product that we’re all proud of.