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## 253 Final Project Ideas

## Summary

For the final project I would like to work with the pong files and I would want to create two other pong games (three if I have time).

The first one I want to call it 10 Ball Pong. It will have 9 black balls and 1 red ball. The game is meant for one player. People can take turns playing, maybe i'll put a leader board. The player only has to hit the red ball to get a point and if you hit a black ball than no point. I think I want to put the score up to 20 maybe more. Once the player reaches the score the game is over. I want to make the speeds of the balls to be all different(random). I want some of the speeds to be fast and some slow and I want the balls to bounce in all different directions. I want there to be one paddle in the middle and at the bottom of the screen. You can move the paddle from right to left by using the "q" to move left and the key and "p" to move the right key. I want to try and make the player experience fun. For the design part, i'm really into pastel colors, so i'm going for a pale pink for the background and a white paddle. I will make a score at the bottom of the page or I was thinking to make the score more with the paddle.

The second pong game I want to create will be called Rotating Pong. In this one you will have one paddle and that paddle will be rotating in different ways, clockwise or counterclockwise. The player can move the paddle up and down and left and right. I made the paddle rotate because I thought it would be a nice visual effect and I think it would make the game a bit more harder to play. There will be a leader board, it will show the highest rank players based on how long they played without stopping, I want to make it a ridiculous about of time like 5 hours for some and 2 and a half for others. I want to do this because I feel like it would make the players want to beat it and that means they will play the game over and over again. Therefore I am hoping the player experience will be fun and exciting. There will be one (maybe two) balls. I want the speed of the ball to be random because it will be more fun than a normal speed. You can move the paddles right or left with the keys "2" and "r" and to move it up or down the keys are "3" and "e". I picked those keys because they are close to each other on the keyboard and I feel like it will be easy to play with one hand. Lastly, I was thinking of putting text in the corner like " press I to end the game" that is for when the give up of a return to menu. For the design part, im sticking to the pastel colors, this time it will be purple with a white paddle/ball and I want the leaderboard to look like it's apart of the background.

Lastly, the third pong game I want to create is going to be called Random Pong. I want the paddles and the balls to change size and color every few minutes.

For example:

One min = ball size 5 and a circle Min two = ball size 10 and a rect Min three = ball size 7 and a triangle Etc...

This game is for two players and I want the paddles to stay a rect but change the width and colors only. For the score it's who ever hits the ball 10 times wins. Maybe i'll also have the way the player controls the game change too, like which key to use maybe the background will change with the keys,i'm not sure yet. I might even look at having the window size change too. I feel if I do this the players will think it's hard to play and win and they will keep trying to prove themselves wrong but trying to win. For the design part I was thinking of orange for the background.

## Technical approach

For the 10 ball pong I would like to use a array to make the balls and I would have to make a ID for only one of the balls because you only get a point when you hit the red ball and not the black ones (the score). I would have to change the color of one of the balls in the array do i'm going to try and do that with a ID. I want to put collision to all the balls but it should only count for the red. I would have to put the paddle in the middle so to do that I make a new *int* and I called in horizontalHeight to get it to stay in the middle. I want to put a random function for the speed. There will be a function if the ball hits the side of the screen it bounces back and does not go off the screen and never be seen again.

For the Rotating Pong game the functions are pretty much the same as the 10 pong, like if the ball hit the side of the screen, random for the ball speed, and I used the same *int* to get the paddle in the middle and to make the paddle rotated I used translate and rotate but I will need pushMatrix() and popMatrix because the origin point is the corner of the screen but I want to rotate a paddle that is in the middle of the screen. There will be a ID or a counter or timer for the leaderboard, just for the player time. I was thinking of making a new class for the table.

For random pong it has the same function as the two pong games above like: if the ball hits the side of the screen, random for the speed, and a paddle ID for the score when your paddle touches the ball you get a point. I will use random to change the size of the paddles, the shape of the balls and the colors of the paddle and ball. Lastly I want to put some type of animation in the background so I might need the noise function.

Since 10 ball pong and rotating pong only have one paddle, I changed the function for the the paddle to be middlePaddle (10 pong) and horizontalPaddle (rotatingpong).



