Test Plan/Data

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Overall, I tested my program with Owen, my sister, and myself. I usually tested alone, but since it is two-player racing game, I could not do everything by myself. Therefore, I asked Owen and my sister to play with me and found some errors.

In the very beginning, I just drove my car to check if the car goes well. I tried going forward, backward, and rotating. At that point, I found out that my rotation does not make sense. I rotates even though the car is stopped, so I fixed that by setting the rotation depending on the speed.

Owen found my second error when I was playing with him. When he tapped the forward button, the car went through the middle part where it was supposed to be a curb. Also, the cars could overlap easily by the same way. He also found out that it went out the map easily just by tapping the button, so I had to fix this problem. At the moment when a car collides, I always set the coordinate of the car again now, so it does not go through anymore. By this way, I could also fix another problem at the same time. Previously, when a car goes to a corner of the map, it did not move at all. However, this problem was also fixed by resetting the coordinate of the car.

Mr. Miller found my third error. When they detect the collision, the range of the car was actually a little bit bigger than the actual picture of the car. I could not change the size of the rectangle of the car only, so I managed to fix this problem by reducing the size of a curb and hazardous parts. However, I could not fix the collision between cars. Sometimes, the program still detects as collision even though the cars did not collide.

My fourth error was found when I made booster. When players used booster to each other, they overlapped again. In order to fix this, I made the collision detection not to work for 0.1 second. The reason why they used to overlap was because they still detected the collision even though they are going backwards already and set the car to go forward again.

Other than these, I tried to check if the user cannot cheat with laps by going backward and forward of the start line, and it worked perfectly fine. Also, I checked if the time is working well, so I set the time to 59 seconds and see how the time changes when it turns to 1 minute. I did not work well, so I had to find a way to fix it, and I fixed it by setting the minute value to 0 every time right before the program calculates the minute and add.

At the very end, I found out that when a player goes backward, the number of lap decreases by 1 only once and not every time.

In summary, the only errors I found that is not still fixed yet is the range of the car that detects collision and the number of laps when the car goes backward.