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CPSC 254

CS 254 Project Summary

For our CPSC 254 project, we decided to alter existing source code for a simple Snake game written in JavaScript. We were able to fork our repository and the existing source code we need for this project from a different repository. We decided to use GitHub for our project because we wanted to be able to clone individual copies to our local machine and have the ability to push changes made to the code to our remote repository. This allowed us to freely experiment with changes without affecting the original Snake game source code and it gave us a starting point for our project. With this, we were able to make changes to the original Snake game source code and alter it to run the way we desired. Some of the changes we made to the code was changing the shape of the snake, changing the color of the snake, making the snake’s food bounce instead of just staying in one place, and changing the color of the food. As a team, we decided that we would all split the work needed to be done to the project in order to meet the requirements we needed.

During the process of working on our project, we came across some challenges as we tried to alter the source code. The first challenge we faced was the original code we forked was not commented, so it was difficult to understand how the code was being used and how it worked. We had to spend a good part of our time working on this project learning how to understand the code and what it actually did. Once we began to understand the source code, we were able to start modifying the it with the changes we wanted to see in our project. One of the first changes we wanted to really focus on was adding color to the game and make it more visually appealing to the players. We decided to alter the snake by randomizing its color every time the snake ate one of the foods that made it grow. We were able to do this by creating a function that randomly generated a color and then called that function whenever the snake ate a food. We then decided to modify the food the snake ate by creating a function that made it bounce around the canvas instead of just staying a one place the whole time. This modification was a little hard to work with because we were having trouble getting the snake to eat the food after we successful got it to bounce around the canvas. We noticed that the snake was having trouble eating the food while the it was bouncing around. The snake only ate the food if it came into contact the food at the right time and at the right angle. This made it difficult because the snake would not always eat the food, but instead it would just go through it. We were able to fix this problem by making the hit box on the food larger, which made it easier for the snake to eat it instead of going through it majority of the time. We then were able to make a different function to randomly generate a color for the food every time it bounced off one of the walls of the canvas. One of the last modifications we wanted to make to the original Snake game we worked on was changing the shape of the snake itself. The original source code had the snake in the shape of a rectangle, and it would add another rectangle every time it ate one of the foods. Instead of just changing the snake to one different shape, we decided to create a function that we used to randomly generate a different shape to the snake whenever it ate food. The snake would change between a rectangle, triangle, and a circle.

All in all, our goal for this project was altering given source code for a simple snake game and make it more visually appealing with different colors and shapes. We all worked together to make changes to the original code and made sure that all our modifications worked well as we pushed code to our GitHub repository. The changes made to the game successful worked and made the game different from the original Snake game.