For my final project, I used JavaScript to create a game of Monopoly. My objective for this project was to design a board game using JavaScript. I have designed an RPG before and I wanted to expand my horizons by learning about how board games are designed. I also wanted to learn about how Monopoly is designed.

I designed the game by using objects in JavaScript. I designed the game for one player for ease of making it. To ensure I had a working product, I focused first on designing the spots on the visual of the board. My main goal was making a simplified version of Monopoly for a digital medium. I designed the Monopoly board to be different partially because of the difficulty of implementing the original design using JavaScript but mainly to better suit a digital medium. Because the game won’t be played with players crowding around a board, the descriptions could all be ordered in rows and be written horizontally.

For the player, I created an object for them with variables for name and money. For spaces on the board, I used for loops to create dividers with information such as space name and space cost for every side of the board. For cards, I made objects for each card with variables for name and description. I made two arrays of card objects, one for community chest and one for chance. I didn’t implement a code to randomize the card object order in the array because I was unable to come up with a code to do that in time. I also used a randomizer to randomize two values from 1 to 6 to simulate rolling two dices. To have players manually roll the dice, I implemented a function and a button. With the nature of money, I designed my version of Monopoly to be like a casino game, simple to use and addictive.

For this version, I made all the card texts horizontal because the game is one player and to facilitate playing the game on a computer screen, which can’t be used like a board in a board game. I also included a message board to tell what value they have rolled with the die, what spot the player has landed on, what kind of spot they’ve landed on, what card they’ve drawn if that spot is either a Chance of Community Chest spot, and how much money they earned for ease of play. Similarly, I created a scoreboard to keep track of how much the player has earned.

I didn’t have the player piece appear on the gameboard because I felt it would be too complicated to implement with my short work period. Instead, I placed it on the scoreboard. To keep track of where the player is, the player’s location is written on the scoreboard.

For this version of Monopoly, I require the player to have to give 10% of their money to roll the dice. My idea was to give the impression that the game of earning money is rigged and only the lucky win. With this unfairness, I wanted to make the game harder to play and make players more likely to get irritated and quit the game earlier. I also created a goal of the game to earn a million dollars because this version is a single player version and I felt it needed a different objective suited for a single player game.One feature from the original game I didn’t include was the choice to purchase land. I didn’t include that choice because there’s no player 2. I also considered that the bought land wouldn’t benefit the player either.Also made a penalty for going to jail, losing 20% of your earnings to create a direct penalty for going to jail. Because there’s no second player, there is no direct risk of ending up in jail.

Creating this version of Monopoly, one of the most difficult parts was designing the board and learning how to use dividers in JavaScript.