Mastermind

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The game of Mastermind has simple instructions and few rules, yet involves a lot of strategy and thought in order to win. We originally chose the game because of its simplistic gameplay, but it involved much more effort than initially thought.

Although our web interpretation of Mastermind is designed to look best on a desktop monitor, the webpage itself if completely scalable. This was one of the more time consuming aspects of our web game. Every HTML5 element is positioned relative to each other and therefore maintains a correct position on the screen. This also means that every clickable element also scales in order to maintain its functionality.

Our version of Mastermind also utilizes many CSS3 features in order to make the game visually appealing to the player. Some of these CSS3 features include a shadowed border for the board and transparent boxes behind the instructions and control specifications. Along with our nicely designed board, the feature we are most proud of is the color selector tool. Once the user selects a peg, a color wheel animates in for the user to select one of the eight colors. As they hover over a color, the color picker increases in size and changes the color of the original peg they are selecting a color for.

Checking the user’s guess is another area where we spent a lot of time. Knowing which color key pegs and how many key pegs to display proved to be a challenge. This required multiple debugging phases for our original checkGuess() function.

The combination of all these features, along with the utilization of jQuery for animations, is evidence to why we deserve full credit for the assignment. We poured our blood, sweat, and tears into our implementation and are very proud of what we have accomplished.

Rules:

The objective of Mastermind is to solve your opponent’s hidden code in as few turns as possible. Throughout gameplay, each player will assume the role of both the Codemaker, as well as the Codebreaker. The Codemaker is in charge of creating the code for the Codebreaker to solve. The “code” is composed of four colored pegs, chosen by the Codemaker. These colored pegs may be any combination of the eight possible colors (blue, cyan, red, green, lime, pink, orange, and yellow) and can include two or more of the same color.

The Codebreaker attempts to match the code by placing four colored pegs of their own onto the playing board. The Codemaker analyzes the guess, and then provides feedback to the Codebreaker using key pegs. A red key peg symbolizes that the Codebreaker has a peg of the correct color and location. A white key peg symbolizes a peg of the correct color but a misplaced location. The Codebreaker has ten attempts to crack the code.

Controls:

For the active row, click on a peg to assign it a color. After assigning all pegs a color, click the check guess button. Crack the code with as few turns as possible!