

Assignment 3 – JavaScript Game

Description:

I chose Sudoku for this time because since I was a child, my dad has been good at math. He often played Sudoku games with me. Little did I expect that one day I would create this type of small game on my own using programming. Mainly, I used HTML, CSS, and JavaScript files.

The rules of sudoku game:

The rules of this game are similar to a regular Sudoku game. The 9x9 grid should contain numbers 1-9 in each row and column, and each of the nine 3x3 subgrids should also have numbers 1-9. The total score for the game is one hundred points, and there are unlimited attempts. After each attempt, you can check your solution by pressing 'Check Solution.' This will display your score, and the grid will show red and green cells. Red cells indicate incorrect entries, while green cells indicate correct ones. The ultimate goal of this game is for everyone to achieve a perfect score of one hundred. However, if you decide not to continue answering during the game, you can press 'Show Solution' to reveal the answers directly.

Approach / What I Did:

I encountered several challenges during the programming process. For example, initially, when pressing 'Check Solution,' it wouldn't display whether the entry was correct or incorrect; it only showed errors. I later added more scoring, starting from zero initially, but I wanted the final score to be one hundred. So, I adjusted the initialization accordingly. I chose a grid where each number had its own cell because I found it clearer, and it looked better when displaying correct and incorrect entries with different colors. However, aligning the numbers in the cells took quite some time since they often didn't appear in the center. I modified the code to make it more visually appealing. The last issue I faced was that when pressing 'Show Solution,' the numbers wouldn't appear, only the colors. I made some adjustments to the links and introduced a couple of formulas to address this issue.

Issues and Resolutions:

I encountered numerous challenges in this assignment, mostly related to layout and formatting issues. To address these problems, I researched solutions online and incorporated some concepts from C or C++. Although the teacher covered many JavaScript techniques in class, I personally felt less familiar with them. Therefore, for this assignment, I looked up more terms and concepts on the internet. After resolving all the issues mentioned above, I don't consider my game to be particularly difficult. However, I believe the valuable part of this experience lies in facing problems and figuring out solutions. Through this process, I have learned a lot.

Analysis:

After completing this game, I learned various coding techniques. In the past, when playing online games, I used to get immersed in the gameplay without paying much attention to how the layouts and formulas were coded. What may seem like a simple layout often requires writing many files to achieve. Although the Sudoku game I wrote this time may not be very challenging, I gained a deeper understanding of how loops operate. I hope to have the opportunity to try writing different games in the future.

Screenshots:

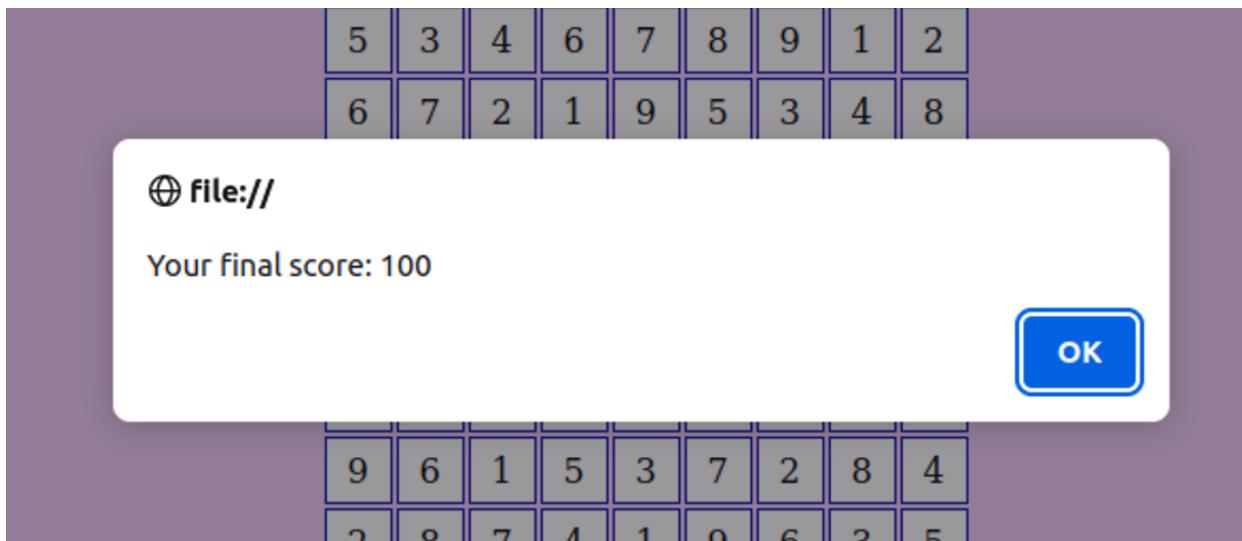
layout



Show solution



Click check solution



Green color mean you're correct

Sudoku Game

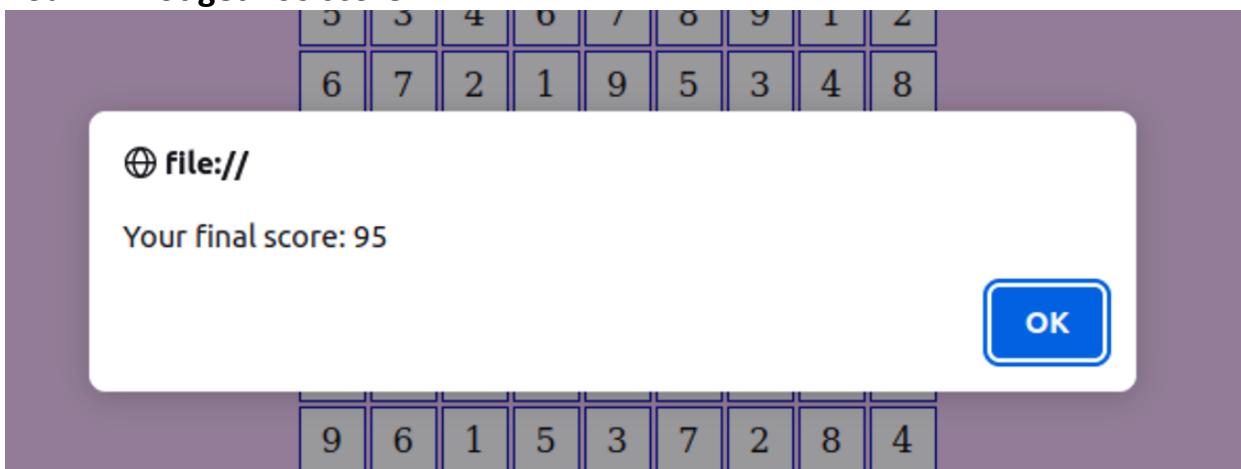
5	3	4	6	7	8	9	1	2
6	7	2	1	9	5	3	4	8
1	9	8	3	4	2	5	6	7
8	5	9	7	6	1	4	2	3
4	2	6	8	5	3	7	9	1
7	1	3	9	2	4	8	5	6
9	6	1	5	3	7	2	8	4
2	8	7	4	1	9	6	3	5
3	4	5	2	8	6	1	7	9

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If you enter something wrong, like this



You will not get 100 score.



The game will tell you where you went wrong

Sudoku Game

5	3	4	6	7	8	9	1	2
6	7	2	1	9	5	3	4	8
1	9	8	3	4	2	5	6	7
8	5	9	7	6	1	4	2	3
4	2	4	8		3	9		1
7	6	3	9	2	4	8	5	6
9	6	1	5	3	7	2	8	4
2	8	7	4	1	9	6	3	5
3	4	5	2	8	6	1	7	9

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