AS1: Sudoku.

Analysing and improving the given Sudoku interface.

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PROBLEM

Sudoku

COLLABORATORS

Collaborated with nobody.

ILLUSTRATION

Comparison between Version A and Version B:

1. Button Sizes & Color Value:

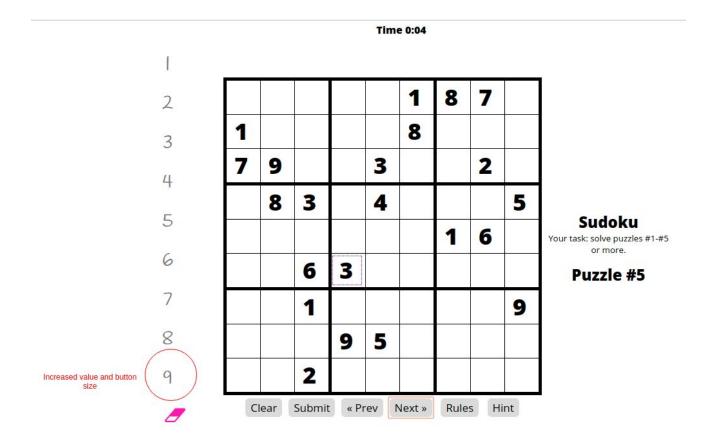
Version A

Your task: solve puzzles #1-#5 or more. Puzzle #2 Time 0:05 9 6 1 9 4 2 8 9 6 Value very low 5 7 6 3 8 3 7 8 1 5 Button Size very 6 small Clear Check « Prev Next »

Logging to the network as Linux-Chrome-3574228018462984

The Heading of the game is shifted to the right side so that the puzzle can fit in the screen and there won't be any need to scroll down. The buttons are also very near in Version A

Version B



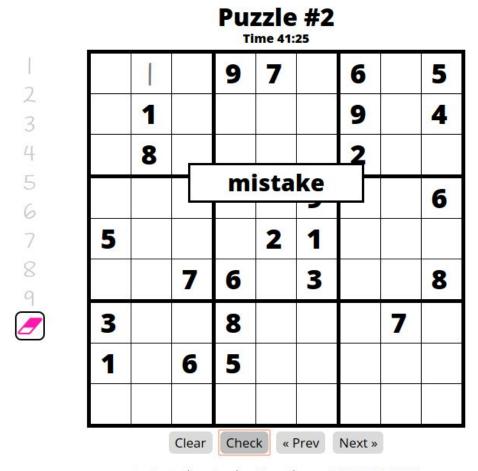
Button sizes are increased along with the color value for each number.

2. Enhanced feedback buttons - Hint button.

Puzzle #1 ok so far Clear Check « Prev Next »

Logging to the network as Linux-Chrome-3574228018462984

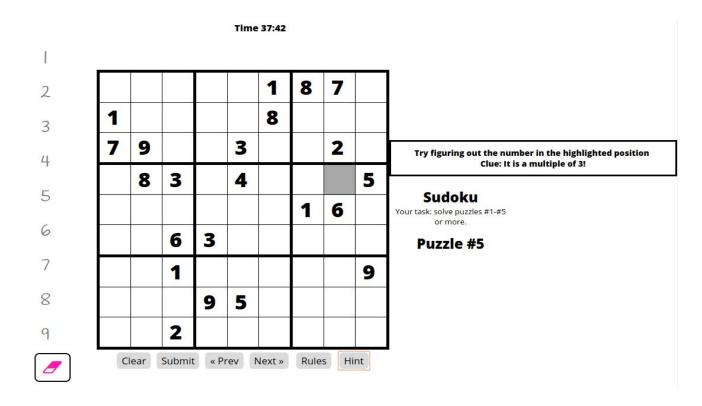
The message "OK so far" appears only till the button is clicked. Once the button is released the message goes away.



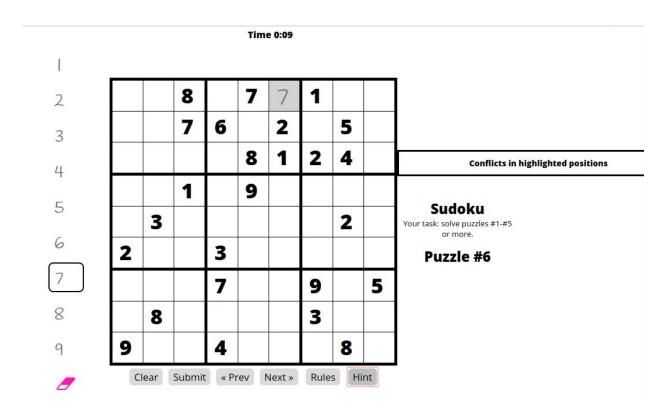
Logging to the network as Linux-Chrome-3574228018462984

The mistake message doesn't tell where the mistake happened. The message stays only till the button is kept pressed.

Version B



The Hint option highlights the cell position along with a clue which helps the user to proceed in the game.



The hint option even shows us where a conflict or mistake occurred.

EXPERIMENTAL HYPOTHESIS

- 1. Reduce the number of mouse clicks This is achieved by removing the reset functionality in Version A. In the removed reset functionality, the default value is given to the eraser whenever there is a mouse click which is creating some unwanted mouse clicks.
- 2. The "Hint" option, which is introduced in version B, will enable the player to proceed forward in the game if he wishes to seek some help.
- 3. The button sizes for the numbers in the left are increased so that the player can play the game more smoothly and reducing the possibility of miss clicks.
- 4. "Rules" button is introduced in Version B in order to enable the user to look back into the rules of the game if he is facing any ambiguity on how to play the game.

NEW LOGGED EVENTS

- 1. User using hint option.
 - a. The total number of times hint is clicked is logged.
 - b. The total number of times the hint was useful is also logged in the game. A hint is considered to be useful when a user attempts to solve for the position indicated by the hint as soon as the position is highlighted by the hint.

2. Game Statistics.

- a. The total number of times erase option is being used This will help us to understand whether removing default erase option from version A is helpful or not in making the game more efficient.
- b. The total number of failed submits.
- c. The total number of instances where the whole board was cleared.
- d. The total number of times "rules" option was used this will enable us in knowing whether the user prefers to read the rules more than once while playing the game.
- e. The size of the board on which the player played his game is also logged.

CONCLUSION

- 1. The number of mouse button clicks reduced. This can be observed by comparing the total number of "mouse down" events logged by version A and version B when their board sizes are equal.
- 2. The time taken for solving a puzzle reduced by using the "hint" button. The version A puzzle is left unsolved as it became very difficult to find in which position the mistake occurred. The indicator for this analysis was number of "victory" events per seed value.