

AS1: Sudoku.

Analysing and improving the given Sudoku interface.

Venkata Devi Niharika Sakuru

656635514

CS422

PROBLEM

Sudoku

COLLABORATORS

Collaborated with nobody.

Time 0:04

1
2
3
4
5
6
7
8
9

Increased value and button size

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

Sudoku
Your task: solve puzzles #1-#5 or more.

Puzzle #5

Clear Submit « Prev Next » Rules Hint

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

2. Enhanced feedback buttons - Hint button.

Puzzle #1

1			1	6			4	9	
2		7			1				6
3									
4	8	2					1		
5	5		ok so far						
6									
7				5		6	8		
8				2		8			5
9									
			7						
					2	4			8
					9	5			

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.

Puzzle #2

Time 41:25

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

mistake

Clear Check « Prev Next »

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.


Time 37:42

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

Try figuring out the number in the highlighted position
Clue: It is a multiple of 3!

Sudoku
Your task: solve puzzles #1-#5
or more.

Puzzle #5

 Clear Submit « Prev Next » Rules **Hint**

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

Time 0:09

1

2

3

4

5

6

7

8

9

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

Conflicts in highlighted positions

Sudoku

Your task: solve puzzles #1-#5 or more.

Puzzle #6

Clear

Submit

« Prev

Next »

Rules

Hint

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.