

Sudoku

4. února 2018

1 Introduction

Sudoku is a board game created in 1979. Its popularity is increasing ever since. Purpose of this work is to create an electronic version of this game.

2 Rules

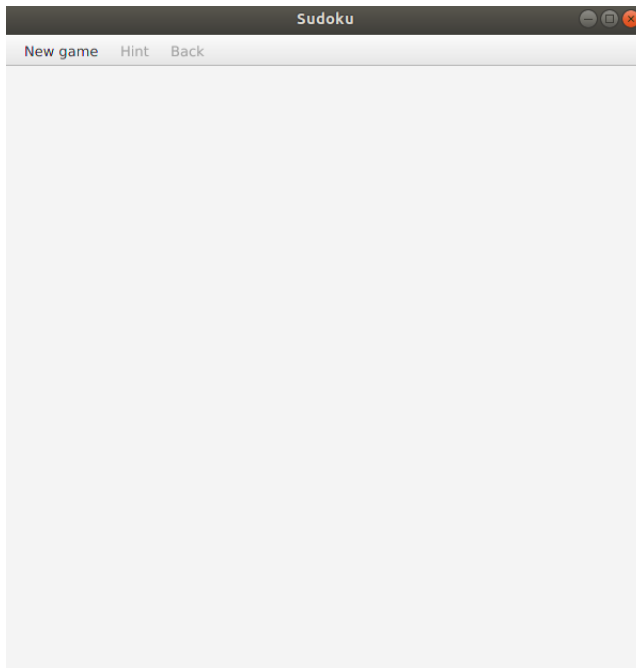
Game takes place on a board of size 9x9 cells.

- There has to be every number from interval 1-9 in every row exactly once.
- There has to be every number from interval 1-9 in every column exactly once.
- Board is divided into 9 areas of size 3x3. Each of those areas has to contain every number from interval 1-9 exactly once.

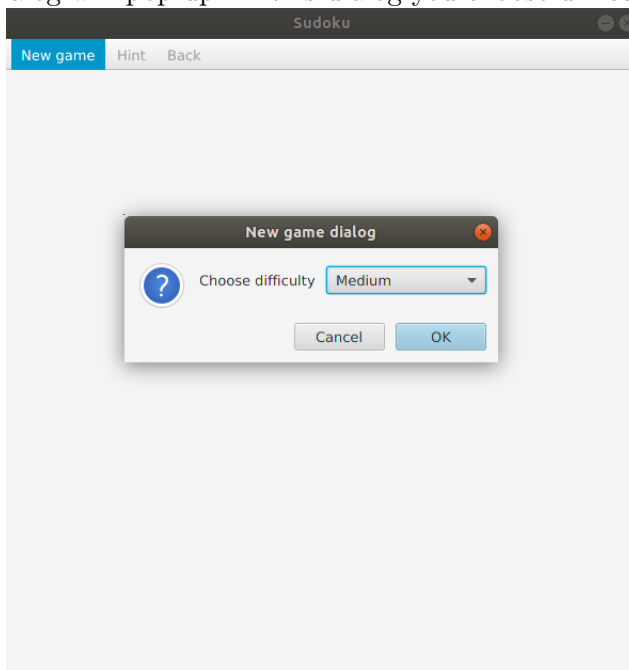
4		5	7			2	6	
	6	1		9	2	7	3	4
7			4	3	6		5	
6	2		1			9	8	
	1		3		4	6	2	7
3		8		2	9	1		
9		6	2	5	1			8
			9	4	7	5	1	6
1	5	7	8				9	2

3 User documentation

After starting the program you can see following screen:



To create a game, you need to press button with text "New game". After clicking on this button a dialog will pop up. In this dialog you choose difficulty for the following game.



Clicking on Medium you will show all difficulties possible. Choose one and press OK to continue. A game will be generated.

Sudoku								
New game Hint Back								
6	7	9	3		8		5	
5				6		8	7	9
1		8	9	7	5		6	
4	5	7	8	9		6		1
3	6	1		5		9	8	
8	9		6	1		5		7
	1	5			6		9	8
9	8		5		1			6
		6	2	8	9			5

You can notice 3 different colours of numbers on this screen. Those colours denote who wrote the number.

1. Black - this number was written by the generating program, it cannot be overwritten or deleted
2. Red - this number was written by the Hint button, it cannot be overwritten or deleted
3. Blue - this number was written by user, you can overwrite or delete it

To fill a cell by a number you need to tag the cell and write a digit (1-9) on your keyboard. To overwrite a number in a cell you need to tag the cell, delete the previous number and write a new one. As you can notice in the upper panel, Hint and Back button has been enabled.

Purpose of **Hint** button is to give hint to the user. After clicking on this button, application will either overwrite player's mistake (rewrite incorrect number to the correct one) or (if any like that exists) fill correct number to an empty cell. This action cannot be reversed.

Purpose of **Back** button is to allow user to take his last action back. It removes player's last action.

When all cells are filled, user is informed whether he won or not. After win you can press "New game" to start another game.