

36. Valid Sudoku

Medium

3180

601

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Determine if a  $9 \times 9$  Sudoku board is valid. Only the filled cells need to be validated **according to the following rules**:

1. Each row must contain the digits 1-9 without repetition.
2. Each column must contain the digits 1-9 without repetition.
3. Each of the nine  $3 \times 3$  sub-boxes of the grid must contain the digits 1-9 without repetition.

Note:

- A Sudoku board (partially filled) could be valid but is not necessarily solvable.
- Only the filled cells need to be validated according to the mentioned rules.

Example 1:

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

Input: board =  
[[["5","3",".",".","7",".",".",".","."],  
["6",".",".","1","9","5",".",".","."],  
[".","9","8",".",".",".","6","."],  
["8",".",".","6",".",".",".","3"],  
["4",".",".","8",".","3",".",".","1"],  
["7",".",".","2",".",".","6"],  
[".","6",".",".","2","8","."],  
[".",".","4","1","9",".",".","5"],  
[".",".",".","8",".",".","7","9"]]  
Output: true

Example 2:

Input: board =  
[[["8","3",".",".","7",".",".","."],  
["6",".",".","1","9","5",".",".","."],  
[".","9","8",".",".","6","."],  
["8",".",".","6",".",".","3"],  
["4",".",".","8",".","3",".",".","1"],  
["7",".",".","2",".",".","6"],  
[".","6",".",".","2","8","."],  
[".",".","4","1","9",".",".","5"],  
[".",".",".","8",".",".","7","9"]]  
Output: false  
Explanation: Same as Example 1, except with the 5 in the top left corner being modified to 8. Since there are two 8's in the top left 3x3 sub-box, it is invalid.

Constraints:

- board.length == 9
- board[i].length == 9
- board[i][j] is a digit or '.'.

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```
1 class Solution {
2     public boolean isValidSudoku(char[][] board) {
3
4     }
5 }
```