

Valid Sudoku

Medium

Determine if a 9x9 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 9 3x3 sub-boxes of the grid must contain the digits 1–9 without repetition.

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

A partially filled sudoku which is valid.

The Sudoku board could be partially filled, where empty cells are filled with the character '.'.

Example 1:

Input :

```
[  
  ["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:

```
[  
["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.

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.
- The given board contain only digits 1-9 and the character '.'.
- The given board size is always 9x9.