**36. Valid Sudoku**

Medium

2333528Add to ListShare

Determine if a 9 x 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 x 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:**

黑白色的鸟

中度可信度描述已自动生成

**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 '.'.