Sudoku Solver

Try to solve the Sudoku Solver problem.

We'll cover the following

Statement

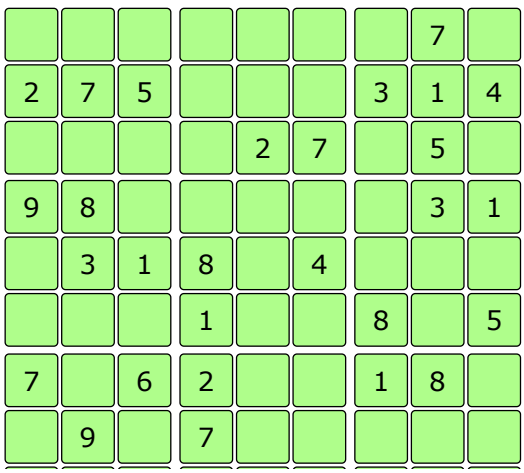
Given a 9 x 9 sudoku board, solve the puzzle by completing the empty cells. The sudoku board is only considered valid if the rules below are satisfied:

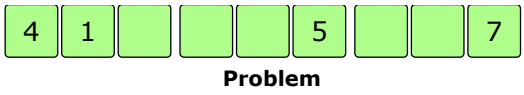
- Each row must contain digits between 1–9, and there should be no repetition of digits within a row.
- Each column must contain digits between 1–9, and there should be no repetition of digits within a column.
- The board consists of 9 non-overlapping sub-boxes, each containing 3 rows and 3 columns. Each of these 3 x 3 sub-boxes must contain digits between 1–9, and there should be no repetition of digits within a sub-box.

Constraints:

- `board.length` $= 9$
- `board[i].length` $= 9$
- `board[i][j]` is a digit or `.`.
- The input board is guaranteed to have one solution.

Example





Problem

Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Sudoku Solver

1 Is the 9 x 9 sudoku board given below valid?

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

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

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

A) Yes

B) No

Submit Answer

Question 1 of 2
0 attempted

Reset Quiz

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.

> **Note:** As an additional challenge, we have intentionally hidden the solution to this puzzle.

Drag and drop the cards to rearrange them in the correct sequence.

Else, we move to the next cell.

Backtrack if the solution is not yet present, and remove the last number from the cell.

Write down that number that is now present in the current row, column, and box.

One by one, place all numbers between 1 and 9 in the current cell, if that number isn't already present in the current row, column and 3x3 sub-box.

If we reach the last cell, that means we've successfully solved the sudoku.

Start iterating the board from the top left cell until we reach the first free cell.

Reset Submit

Try it yourself

Implement your solution in the following coding playground.

> **Note:** We have left the solution to this challenge as an exercise for you. You may try to translate the logic of the solved puzzle into a coded solution.

usercode > SolveSudoku.java

```
class SolveSudoku {
  public static char[][] solveSudoku(char[][] board) {
    // Write your code here
    // you have to return the resultant board
    return board;
  }

}
```

Powered by AI

Submit

Test Cases | Results

Case 1 | Case 2 | Case 3

Input #1

[[".",".",".",".",".",".",".",".",".","7",".","."],["2","7","5",".",".",".",".",".","3","1","4"],[".",".",".",".",".",".",".","2","7",".",".","5",".","."],["9","8",".",".",".",".",".",".",".","3","1"],[".",".","3","1","8",".",".","4","."

Sudoku Solver

Back

Solution: Restore IP A...

Next

Matchsticks to Square

Mark as Completed