37. Sudoku Solver

Description

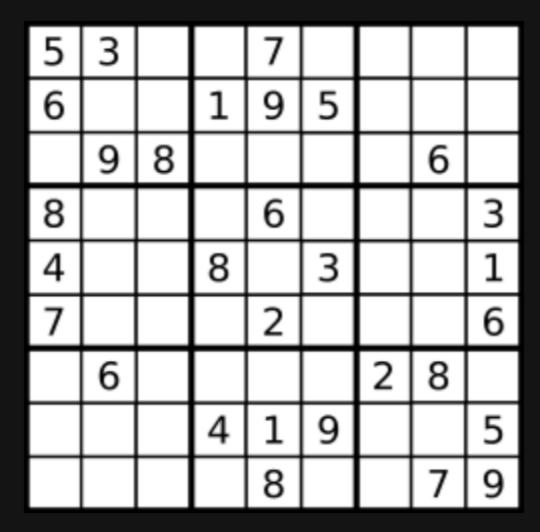
Write a program to solve a Sudoku puzzle by filling the empty cells.

A sudoku solution must satisfy all of the following rules:

- 1. Each of the digits 1-9 must occur exactly once in each row.
- 2. Each of the digits 1-9 must occur exactly once in each column.
- 3. Each of the digits 1-9 must occur exactly once in each of the 9 3x3 sub-boxes of the grid.

The '.' character indicates empty cells.

Example 1:



5	3	4	6	7	8	9	1	2
6	7	2	1	9	5	ო	4	8
1	9	8	m	4	2	5	6	7
8	5	9	7	6	1	4	2	3
4	2				3			
7	1	3	9	2	4	8	5	6
9	6				7			
2	8	7	4	1	9	6	3	5
ß	4	5	2	8	6	1	7	9

Constraints:

- board.length == 9
- board[i].length == 9
- board[i][j] is a digit or '.'.
- It is **guaranteed** that the input board has only one solution.