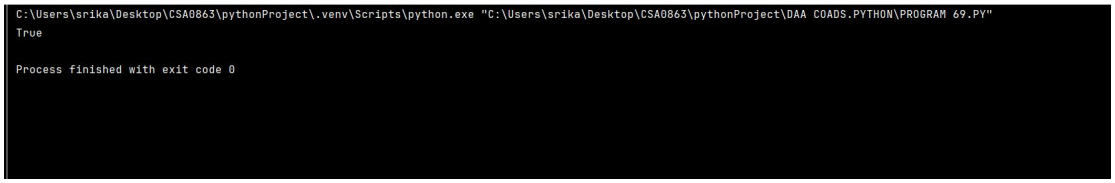
Determine if a 9 x 9 Sudoku board is valid. Only the filled cells need to be validated according to the following rules:
1.Each row must contain the digits 1-9 without repetition.
2.Each column must contain the digits 1-9 without repetition.
3.Each of the nine 3 x 3 sub-boxes of the grid must contain 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.

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
Program:

```
def isValidSudoku(board):
    def is_valid_group(group):
        elements = [num for num in group if num != '.']
        return len(elements) == len(set(elements))

    # Check rows
    for row in board:
        if not is_valid_group(row):
            return False

    # Check columns
    for col in range(9):
        if not is_valid_group([board[row][col] for row in range(9)]):
            return False

    # Check 3x3 sub-boxes
    for box_row in range(0, 9, 3):
        for box_col in range(0, 9, 3):
            box = [board[row][col] for row in range(box_row, box_row + 3) for col in
range(box_col, box_col + 3)]
            if not is_valid_group(box):
                return False

    return True

# Example usage
```

```
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"]
]

print(isValidSudoku(board))
```

Output:



Time complexity:

O(1)