

```

#include <stdio.h>
#include <stdlib.h>
int sudokuSolv(int** board, int* emptySet, int depth, int size, int emptySetSize){
    // base case - all done
    if(depth == emptySetSize){
        for(int i = 0; i < size; i++){
            for(int j = 0; j < size; j++){
                printf("%d", board[i][j]);
                printf("\n");
            }
            return 1;
        }
        int soln = 0;

        // Find the row and column of the next blank cell
        int row = emptySet[depth] / size;
        int col = emptySet[depth] % size;
        int temp = 1;

        // Can I place i in the next blank position?
        for(int i = 1; i <= size; i++){
            temp = 1;
            // Has i already been used in this row or this column?
            for(int j = 0; j < size; j++){
                temp *= (board[row][j] != i);
                temp *= (board[j][col] != i);
            }
            // Good - i is available for this row and column
            if(temp){
                board[row][col] = i;
                soln += sudokuSolv(board, emptySet, depth + 1, size, emptySetSize);
            }
        }
        board[row][col] = 0; // Reset
        return soln;
    }
}

int main(){
    int n;
    scanf("%d", &n);
    int **board = (int**)calloc(n, sizeof(int*));
    for(int i = 0; i < n; i++){
        board[i] = (int*)calloc(n, sizeof(int));
    }

    int r, c, v;
    int count = 0;
    while(1){
        scanf("%d %d %d", &r, &c, &v);
        if (r == -1)
            break;
        count += 1;
        board[r][c] = v;
    }

    int *emptySet = (int*)(calloc(n * n - count, sizeof(int)));
    int index = 0;
    for(int i = 0; i < n; i++){
        for (int j = 0; j < n; j++){
            if (!board[i][j]){ // Unfilled position
                emptySet[index] = i * n + j;
                index += 1;
            }
        }
    }
    int soln = sudokuSolv(board, emptySet, 0, n, index);
    printf("%d", soln);
    return 0;
}

```