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#include <stdio.h>

#include <stdbool.h>

#define N 10

int board[N][N];

bool isSafe(int row, int col, int n) {
    for (int i = 0; i < col; i++) {
        if (board[row][i])
            return false; }

    for (int i = row, j = col; i >= 0 && j >= 0; i--, j--) {
        if (board[i][j])
            return false; }

    for (int i = row, j = col; j >= 0 && i < n; i++, j--) {
        if (board[i][j])
            return false; }

    return true; }

bool solveNQueens(int col, int n) {
    if (col >= n)
        return true;

    for (int i = 0; i < n; i++) {
        if (isSafe(i, col, n)) {
            board[i][col] = 1;

            if (solveNQueens(col + 1, n))
                return true;

            board[i][col] = 0; } }

    return false; }

void printSolution(int n) {
    for (int i = 0; i < n; i++) {
        for (int j = 0; j < n; j++) {
            printf("%d ", board[i][j]); }

        printf("\n"); } }

int main() {

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int n;

printf("Enter number of queens: ");

scanf("%d", &n);

if (n <= 0 || n > N) {

    printf("Invalid input. N should be between 1 and %d.\n", N);

    return 1; }

for (int i = 0; i < n; i++) {

    for (int j = 0; j < n; j++) {

        board[i][j] = 0; } }

if (!solveNQueens(0, n)) {

    printf("Solution does not exist.\n");

    return 0; }

printf("Solution:\n");

printSolution(n);

return 0;

}

```

```

input
Enter number of queens: 4
Solution:
0 0 1 0
1 0 0 0
0 0 0 1
0 1 0 0
...Program finished with exit code 0

```