

**CONTINUOUS ASSESSMENTS (C.A)-3**

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```
#include <iostream>
#define N 8

using namespace std;
void printSolution(int board[N][N]){
    for (int i = 0; i < N; i++)    {
        for (int j = 0; j < N; j++)
            cout << board[i][j] << " ";
        cout << endl;
    }
}

bool isSafe(int board[N][N], int row, int col){
    int i, j;

    for (i = 0; i < col; i++)
        if (board[row][i])
            return false;

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

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

    return true;
}
```

```

}

bool solveNQUtil(int board[N][N], int col){
    if (col >= N)
        return true;

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

            if (solveNQUtil(board, col + 1))
                return true;

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

    return false;
}

bool solveNQ(){
    int board[N][N] = {0};

    if (solveNQUtil(board, 0) == false) {
        cout << "Solution does not exist";
        return false;
    }
    printSolution(board);
    return true;
}

int main(){
    solveNQ();
    return 0;
}

```

# OUTPUT

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

```
1 0 0 0 0 0 0 0
0 0 0 0 0 0 1 0
0 0 0 0 1 0 0 0
0 0 0 0 0 0 0 1
0 1 0 0 0 0 0 0
0 0 0 1 0 0 0 0
0 0 0 0 0 1 0 0
0 0 1 0 0 0 0 0
```

```
PS D:\VS CODE\01. PROGRAMS\10. EXAMPLE\Queen> 
```