

```

1 package dfs;
2
3 import java.util.Scanner;
4
5 public class NQueenProblem {
6     Scanner s=new Scanner(System.in);
7     final int N =s.nextInt();
8     void printSolution(int [][]board)
9     {
10         for (int i = 0; i < N; i++) {
11             for (int j = 0; j < N; j++)
12                 System.out.print(" " + board[i][j]
13                     + " ");
14             System.out.println();
15         }
16     }
17     boolean isSafe(int [][]board, int row, int col)
18     {
19         int i, j;
20         for (i = 0; i < col; i++)
21             if (board[row][i] == 1)
22                 return false;
23         for (i = row, j = col; i >= 0 && j >= 0; i
24             --, j--)
25             if (board[i][j] == 1)
26                 return false;
27         for (i = row, j = col; j >= 0 && i < N; i++,
28             j--)
29             if (board[i][j] == 1)
30                 return false;
31         return true;
32     }
33     boolean solveNQUtil(int [][]board, int col)
34     {
35         if (col >= N)
36             return true;
37
38         for (int i = 0; i < N; i++) {
39             if (isSafe(board, i, col)) {
40                 board[i][col] = 1;
41                 if (solveNQUtil(board, col + 1))

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```
40         return true;
41         board[i][col] = 0; // BACKTRACK
42     }
43 }
44     return false;
45 }
46
47 void solveNQ()
48 {
49     int [][]board = { { 0, 0, 0, 0 },
50                     { 0, 0, 0, 0 },
51                     { 0, 0, 0, 0 },
52                     { 0, 0, 0, 0 } };
53
54     if (!solveNQUtil(board, 0)) {
55         System.out.print("Solution does not exist
56 ");
57         return;
58     }
59     printSolution(board);
60 }
61 public static void main(String []args)
62 {
63     NQueenProblem Queen = new NQueenProblem();
64     Queen.solveNQ();
65 }
66 }
```