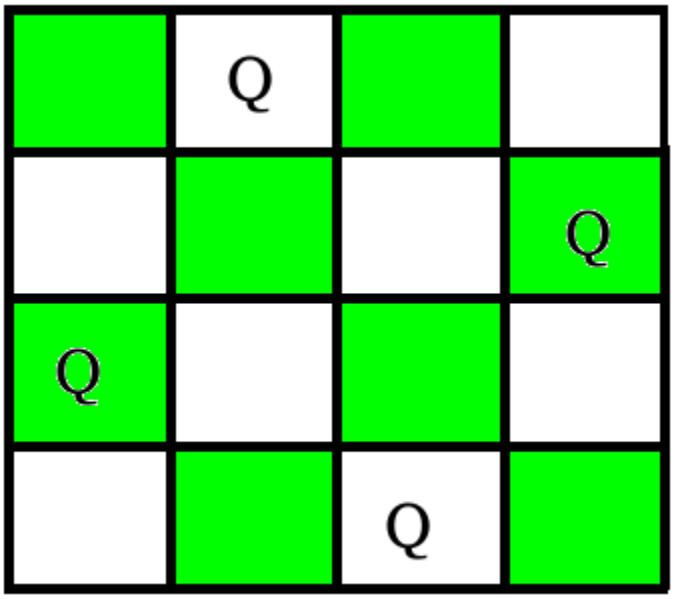
# N-Queen Problem

The n-queens puzzle is the problem of placing n queens on an n×n chessboard such that no two queens attack each other. Given an integer n, print all distinct solutions to the n-queens puzzle. Each solution contains distinct board configurations of the n-queens' placement, where the solutions are a permutation of [1,2,3..n] in increasing order, here the number in the *ith* place denotes that the *ith*-column queen is placed in the row with that number. For eg below figure represents a chessboard [3 1 4 2].




**Input:**
The first line of input contains an integer **T** denoting the no of test cases. Then T test cases follow. Each test case contains an integer n denoting the size of the chessboard.

**Output:**
For each test case, output your solutions on one line where each solution is enclosed in square brackets '[', ']' separated by a space . The solutions are permutations of {1, 2, 3 …, *n*} in increasing order where the number in the ith place denotes the ith-column queen is placed in the row with that number, if no solution exists print -1.

**Constraints:**
1 <= T <= 10
1 <= n <= 10

**Example:**
**Input**
2
1
4
**Output:**
[1 ]
[2 4 1 3 ] [3 1 4 2 ]