

Assignment – 8

N -Queens Problem is the problem of placing $N(N \geq 2)$ chess queens on an $N \times N$ chess-board so that no two queens attack each other. Two queens attack each other if –

- They are on the same row
- They are on the same column
- They are on the same diagonal

Q1. Find only one solution of N -Queens Problem. If there is no solution, print a message “No Solution Exists!”

Q2. Find all the possible solutions of N -Queens Problem. Also, count the total number of such solutions. Here you need to print all the arrangements of the chess board which is the solution to this problem. If there is no solution, print a message “No Solution Exists!”

Solve both the aforementioned questions **Q1** and **Q2** when the conditions for attacking queens changes. Now, two queens attack each other if –

- They are on the same row
- They are on the same column