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**Section:** BSAI-4A

**Subject:** PROGRAMMING FOR ARTIFICIAL INTELLIGENCE(LAB)

**TASK NO:** TASK # 4

**What the code does:**

This code solve the N-Queen problem, which means placing N queens on an NxN chessboard so that no two queens can attack each other.

**Main parts:**

1. PrintBoard(Board)

Shows the chessboard on the screen.

2. Safe(Board, row, col, num)

Checks if it is safe to put a queen at a specific spot on the board.

3.Solve(Board, row, num)

Tries to place queens row by row using backtracking. It finds all possible ways to place the queens safely.

4.NQueens(num)

Sets up the board and starts the process to solve the problem.

**How to use:**

Call ‘NQueens(n)’ where ‘n’ is the number of queens and the size of the board. For example, “NQueens(4)’ will find all ways to place 4 queens on a 4x4 board.