Exp. No: 1

N - Queens Problem

Aim: To solve n-queens problem where the goal is to place n queens on a n×n chess board such that no two queens attack each other.

```
def print_board(board):
    for row in board:
        Print("". join ('Q' if x else '.' for x in row))
    Print()

def is_safe (board, row, col):
    for i in range (row):
        if board [i] [col]:
            return false
    for i,j in zip (range (row, -1, -1), range (col, len(
                                                    board)):
        if board [i] [j] :
            return false
    return True

def solve_queens (board, row):
    if row >= len (board):
        Print_board (board):
        return True.
    for col in range (len (board)):
        if is_safe (board, row, col):
            board [row][col] = True
        if solve-queens(board, row+1):
            return True.
        board[row][col] = False
    return False.

def eight-queens():
    board = [[false]* 8 for _ in range(8)]
    solve-queens(board, 0)
```

Result:

The program is executed successfully and o/p is verified.