

```

1 def is_safe(board, row, col):
2     for i in range(row):
3         if board[i] == col or \
4             board[i] - i == col - row or \
5             board[i] + i == col + row:
6             return False
7     return True
8 def solve_n_queens_util(board, row):
9     if row == len(board):
10        return board
11    for col in range(len(board)):
12        if is_safe(board, row, col):
13            board[row] = col
14            solution = solve_n_queens_util(board, row + 1)
15            if solution:
16                return solution
17            board[row] = -1
18    return None
19 def solve_n_queens(n):
20     board = [-1] * n
21     return solve_n_queens_util(board, 0)
22 def print_solution(board):
23     n = len(board)
24     for row in range(n):
25         line = ['Q' if col == board[row] else '.' for col in range(n)]
26         print(' '.join(line))
27     print()
28 n = 8
29 solution = solve_n_queens(n)
30 if solution:
31     print_solution(solution)
32 else:
33     print("No solution found.")
34

```

Output

```

Q . . . . .
. . . Q . .
. . . . . Q
. . . . Q .
. Q . . . .
. . . . . Q
. Q . . . .
. . . Q . .

```

== Code Execution Successful ==