

```
def is_safe(board, row, col, n):  
    for i in range(row):  
        if board[i] == col or board[i] - i == col - row or board[i] + i == col + row:  
            return False  
    return True
```

```
def solve_queens(board, row, n, solutions):
```

```
    if row == n:  
        solutions.append(board[:])  
        return
```

```
    for col in range(n):  
        if is_safe(board, row, col, n):  
            board[row] = col  
            solve_queens(board, row + 1, n, solutions)  
            board[row] = -1
```

```
def print_solution(board, n):
```

```
    for row in board:  
        line = ['Q' if i == row else '.' for i in range(n)]  
        print(" ".join(line))  
    print("\n")
```

```
def eight_queens(n=8):
```

```
    solutions = []  
    board = [-1] * n
```

```
solve_queens(board, 0, n, solutions)
```

```
print(f"Total solutions: {len(solutions)}\n")
```

```
for idx, solution in enumerate(solutions, 1):
```

```
    print(f"Solution {idx}:")
```

```
    print_solution(solution, n)
```

```
eight_queens()
```