

## N-Queens II

For this problem we only need to return the count of valid solutions, not the actual configurations.

### [Key Idea:]

- Same backtracking logic as N-Queens I:
  - Place queens row by row.
  - Ensure no two queens share:
    - Same column
    - Same diagonal ( $row - col$ )
    - Same anti-diagonal ( $row + col$ )
- Instead of storing boards, maintain a counter for solutions.

### [Complexity:]

- Time:  $O(n!)$  in worst case (similar to permutations).
- Space:  $O(n)$  for recursion +  $O(n)$  for sets.