

```

1 N = 8
2 def is_safe(board, row, col):
3     for i in range(col):
4         if board[row][i] == 1:
5             return False
6     i, j = row, col
7     while i >= 0 and j >= 0:
8         if board[i][j] == 1:
9             return False
10        i -= 1
11        j -= 1
12    i, j = row, col
13    while i < N and j >= 0:
14        if board[i][j] == 1:
15            return False
16        i += 1
17        j -= 1
18    return True
19
20 def solve_nqueens(board, col):
21     if col >= N:
22         return True
23
24     for i in range(N):
25         if is_safe(board, i, col):
26             board[i][col] = 1
27             if solve_nqueens(board, col + 1):
28                 return True
29             board[i][col] = 0
30     return False
31
32 def print_board(board):
33     for row in board:
34         print(' '.join('Q' if x else '.' for x in row))
35     print()
36 board = [[0]*N for _ in range(N)]

```

37

38

```
if solve_nqueens(board, 0):
```

39

```
    print("One possible solution for 8-Queens:\n")
```

40

```
    print_board(board)
```

41

```
else:
```

42

```
    print("No solution exists.")
```

43

```
>>> %Run -c $EDITOR_CONTENT
```

One possible solution for 8-Queens:

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

```
>>>
```