

PRINCIPLES OF ARTIFICIAL INTELLIGENCE ASSIGNMENT -1

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```
1 import copy
2
3 N = 8
4 def printSolution(board):
5     for row in board:
6         for i in range(N):
7             print("Q" if row[i] else ".", end=" ")
8             print()
9     print()
10
11 def isSafe(board, row, col):
12     for i in range(row):
13         if board[i][col]:
14             return False
15     for i, j in zip(range(row - 1, -1, -1), range(col - 1, -1, -1)):
16         if board[i][j]:
```


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main.py

Run

Output

Clear

```
16 if board[i][j]:
17     return False
18 for i, j in zip(range(row - 1, -1, -1), range(col + 1, N)):
19     if board[i][j]:
20         return False
21
22 return True
23 def solve(board, row, solutions):
24     if row == N:
25         solutions.append(copy.deepcopy(board))
26         printSolution(board)
27         return
28
29     for col in range(N):
30         if isSafe(board, row, col):
31             board[row][col] = 1
32             solve(board, row + 1, solutions)
```

```
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