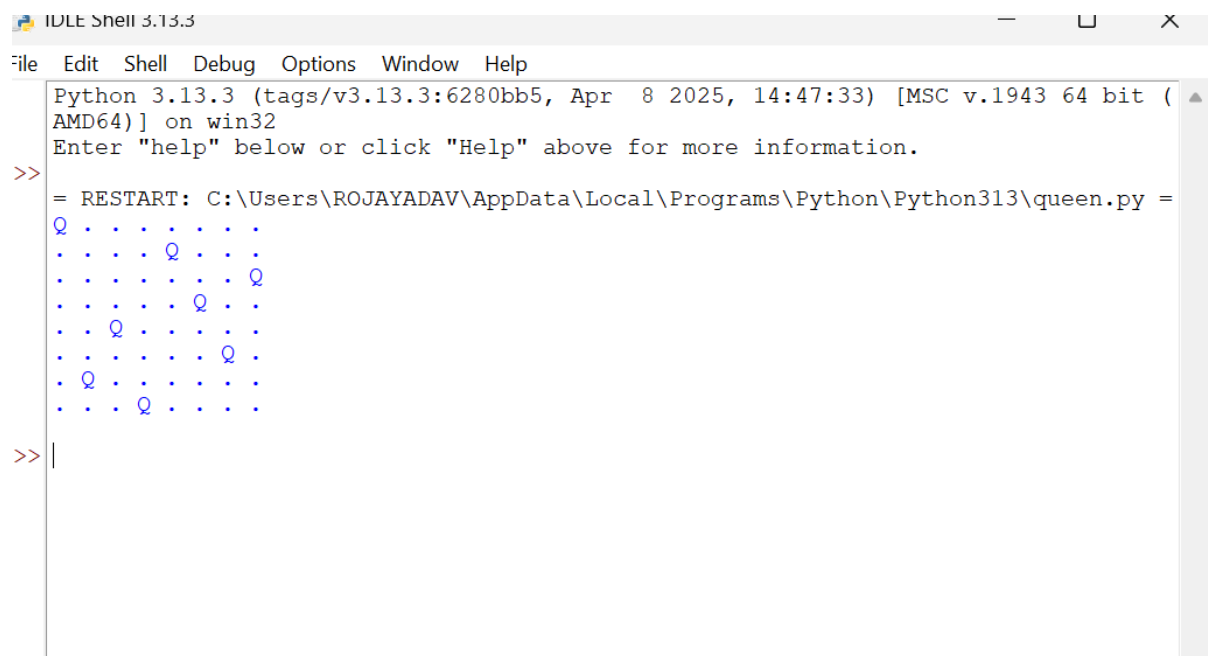


Write the Python Program to solve 8-Puzzle Problem.

Program:

```
def print_solution(board):
    for row in board:
        print(" ".join("Q" if col else "." for col in row))
    print()
def is_safe(board, row, col, n):
    for i in range(row):
        if board[i][col]:
            return False
    for i, j in zip(range(row-1, -1, -1), range(col-1, -1, -1)):
        if board[i][j]:
            return False
    for i, j in zip(range(row-1, -1, -1), range(col+1, n)):
        if board[i][j]:
            return False
    return True
def solve_n_queens(board, row, n):
    if row == n:
        print_solution(board)
        return True
    for col in range(n):
        if is_safe(board, row, col, n):
            board[row][col] = 1
            if solve_n_queens(board, row + 1, n):
                return True
            board[row][col] = 0
    return False
n = 8
board = [[0 for _ in range(n)] for _ in range(n)]
solve_n_queens(board, 0, n)
```

Output:



```
IDLE Shell 3.13.3
File Edit Shell Debug Options Window Help
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr 8 2025, 14:47:33) [MSC v.1943 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>> = RESTART: C:\Users\ROJAYADAV\AppData\Local\Programs\Python\Python313\queen.py =
Q . . . . .
. . . . Q . .
. . . . . Q
. . . . Q . .
. . Q . . . .
. . . . . Q .
. Q . . . . .
. . . Q . . .
>> |
```