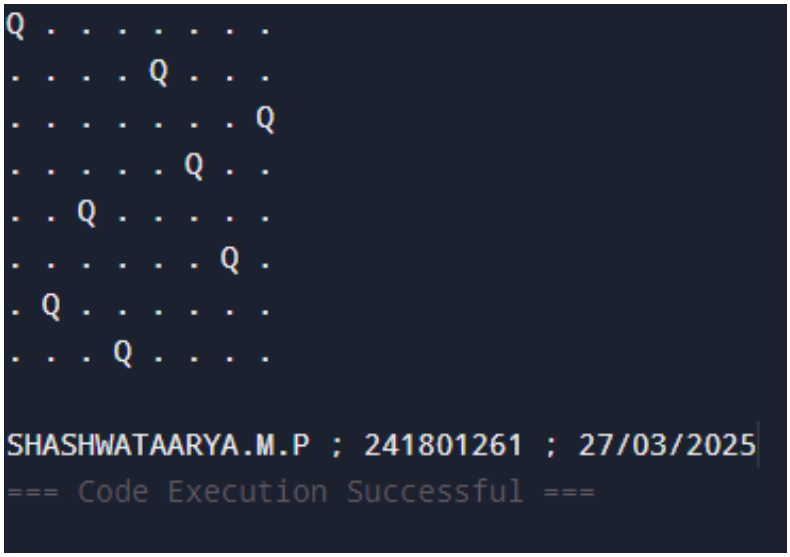
8 QUEENS PROBLEM

Program;

```
def is_safe(board, row, col):
 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(board, row):
 if row == len(board):
 return True
 for col in range(len(board)):
 if is_safe(board, row, col):
 board[row] = col
 if solve(board, row + 1):
 return True
 board[row] = -1
 return False
```

```
def print_board(board):
 for row in board:
 print(" ".join("Q" if i == row else "." for i in range(len(board)))) def
eight_queens():
 n = 8
 board = [-1] * n
 if solve(board, 0):
 print_board(board)
 else:
 print("No solution")
eight_queens()
```

Output;