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Class & sec: AI&DS-FD

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Ex no:1

Date:27-03-2025

Exp:implement eight queen

Problem:

N = 8

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):

# Check this column on upper side

for i in range(row):

if board[i][col]:

return False

# Check upper diagonal on left side

for i, j in zip(range(row, -1, -1), range(col, -1, -1)):

if board[i][j]:

return False

# Check upper diagonal on right side

for i, j in zip(range(row, -1, -1), range(col, N)):

if board[i][j]:

return False

return True

def solve\_n\_queens(board, row):

if row >= N:

print\_solution(board)

return True

res = False

for col in range(N):

if is\_safe(board, row, col):

board[row][col] = 1

res = solve\_n\_queens(board, row + 1) or res

board[row][col] = 0 # backtrack

return res

# Initialize the board

board = [[0 for \_ in range(N)] for \_ in range(N)]

solve\_n\_queens(board, 0)

output

