2. write a python program to solve the 8 queen problem

N = 8

def print\_board(b):

for r in b: print(" ".join("Q" if c else "." for c in r))

print()

def is\_safe(b, r, c):

return all(not b[r][i] for i in range(c)) and \

all(not b[i][j] for i,j in zip(range(r,-1,-1), range(c,-1,-1))) and \

all(not b[i][j] for i,j in zip(range(r,N), range(c,-1,-1)))

def solve(b, c):

if c == N: print\_board(b); return True

for r in range(N):

if is\_safe(b, r, c):

b[r][c] = 1

if solve(b, c+1): return True

b[r][c] = 0

return False

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

solve(board, 0)

OUTPUT:

