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#Assignmentno: DAA-5

def n\_queens(n):

res, col, posDiag, negDiag = [], set(), set(), set()

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

def backtrack(r):

if r == n:

res.append([" ".join(row) for row in board])

return

for c in range(n):

if c in col or (r + c) in posDiag or (r - c) in negDiag:

continue

col.add(c); posDiag.add(r + c); negDiag.add(r - c); board[r][c] = "1"

backtrack(r + 1)

col.remove(c); posDiag.remove(r + c); negDiag.remove(r - c); board[r][c] = "0"

backtrack(0)

print("\n\n".join("\n".join(sol) for sol in res))

n\_queens(4)

0 1 0 0

0 0 0 1

1 0 0 0

0 0 1 0

0 0 1 0

1 0 0 0

0 0 0 1

0 1 0 0