**Experiment 7 N-Queens**

**Code:**

global N

N = int(input("Enter the number of queens: "))

def printSolution(board):

for i in range(N):

for j in range(N):

print(board[i][j], end=" ")

print()

def isSafe(board, row, col):

for i in range(col):

if board[row][i] == 1:

return False

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

if board[i][j] == 1:

return False

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

if board[i][j] == 1:

return False

return True

def solveNQUtil(board, col):

if col >= N:

return True

for i in range(N):

if isSafe(board, i, col):

board[i][col] = 1

if solveNQUtil(board, col + 1) == True:

return True

board[i][col] = 0

return False

def solveNQ():

board = [[0 for i in range(N)] for i in range(N)]

if solveNQUtil(board, 0) == False:

print("Solution does not exist")

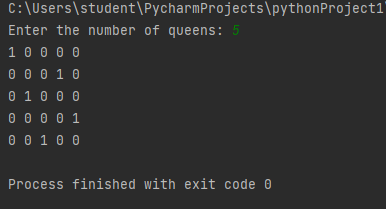
return False

printSolution(board)

return True

solveNQ()

**Outputs:**

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