

### **PROGRAM [3]:**

```
global N
N = 4

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
```

OUTPUT [3]:

```
0 0 1 0
1 0 0 0
0 0 0 1
0 1 0 0
True
```

```
        board[i][col] = 0
    return False
def solveNQ():
    board = [ [0, 0, 0, 0],
               [0, 0, 0, 0],
               [0, 0, 0, 0],
               [0, 0, 0, 0]
             ]
    if solveNQUtil(board, 0) == False:
        print ("Solution does not exist")
        return False
    printSolution(board)
    return True
solveNQ()
```

