# **EX:01 8 Queen problem**

def isSafe(mat,r,c):

for i in range(r):

if mat[i][c] == "Q":

return False

(i,j) = (r, c)

while i >= 0 and j >=0:

if mat[i][j] == 'Q':

return False

i = i-1

j= j-1

(i,j) = (r,c)

while i>=0 and j<len(mat):

if mat[i][j] == "Q":

return False

i = i -1

j = j+1

return True

def printSolution(mat):

for r in mat:

print(str(r).replace(',','').replace('\'' ,'' ))

print("")

exit()

def nQueen(mat,r):

if r == len(mat):

printSolution(mat)

return

for i in range(len(mat)):

if isSafe(mat,r,i):

mat[r][i] = "Q"

nQueen(mat,r+1)

mat[r][i] = '\_'

if \_\_name\_\_ == '\_\_main\_\_':

N = int(input("enter no of queens you want : "))

mat = [['\_'for x in range(N)]for y in range(N)]

nQueen(mat,0)

**Output:**

**enter no of queens you want : 8**

**[Q \_ \_ \_ \_ \_ \_ \_]**

**[\_ \_ \_ \_ Q \_ \_ \_]**

**[\_ \_ \_ \_ \_ \_ \_ Q]**

**[\_ \_ \_ \_ \_ Q \_ \_]**

**[\_ \_ Q \_ \_ \_ \_ \_]**

**[\_ \_ \_ \_ \_ \_ Q \_]**

**[\_ Q \_ \_ \_ \_ \_ \_]**

**[\_ \_ \_ Q \_ \_ \_ \_]**