8- Queen problems

```
import sys

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 -= 1
j -= 1
(i, j) = (r, c)
while i >= 0 and j < len(mat):
if mat[i][j] == 'Q':
return False
i -= 1
j += 1
return True

def printSolution(mat):
for r in mat:
print(str(r).replace(',', '').replace('/', ''))
print()

def nQueen(mat, r):
if r == len(mat):
printSolution(mat)
sys.exit()
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 = 8 # Change N to the desired number of queens
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-
```