N - QUEENS PROBLEM.

AIM:

To solve the N-Queen problem where the goal is to place N-queens on a n×n chessboard such that no two queens attack each other

ALGORITHM:

(1) Start.

(2) Create a n x n chess board.

(3) Ensure no. queen is in the same row upper diagonal.

(4) If queen are placed in all columns return success.

(5) Display the board

(6) If no. sol exists, print in solution does not exist.

PROGRAM:

```
def isSafe(board, row, col, n):
    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
return true.
def solveNQUtil (board, col, n):
    if col >= n
        return true.
    for i in range(n):
        if isSafe (board, col+1, n) ==
                                    true
            return True
        board [i] [col] = 0
    return False
def solve NQ (n):
    board = [ [0] * n for - in range (n)]
    if solveNQUtil (board, 0, n) == False
        print ("Solution does not exist")
    return false
    for i in board:
        print (i)
    return True.
n = int (input ("enter n value"))
solve NQ (n).
```

Output:

Enter value : 5

[1, 0, 0, 0, 0]

[0, 0, 0, 1, 0]

[0, 1, 0, 0, 0]

[0, 0, 0, 0, 1]

[0, 0, 1, 0, 0]