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Roll No.: COTA59
Experiment No.: 04(AI)

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

# Chessboard:
board = [[0] * N for _ in range(N)]

def is_attack(i, j):
    for k in range(0, N):
        if board[i][k] == 1 or board[k][j] == 1:
            return True
    # Checking Diagonals:
    for k in range(0, N):
        for l in range(0, N):
            if (k + l == i + j) or (k - l == i - j):
                if board[k][l] == 1:
                    return True
    return False

def N_queen(n):
    if n == 0:
        return True
    for i in range(0, N):
        for j in range(0, N):
            if (not is_attack(i, j)) and (board[i][j] != 1):
                board[i][j] = 1
                if N_queen(n - 1) == True:
                    return True
                board[i][j] = 0
    return False
N_queen(N)

for i in board:
    print(i)
```

Output:

```
Enter the number of queens:
5
[1, 0, 0, 0, 0]
[0, 0, 1, 0, 0]
[0, 0, 0, 0, 1]
[0, 1, 0, 0, 0]
[0, 0, 0, 1, 0]
```