Exp. No: 1
Date:

8 Queens

```
def print_board (board):
    for row in board:
        print (' '. join ('Q' if x else '.' for x in row))

    print ()


def is_safe (board, row, col):                    # check column
    for i in range (row):
        if board [i] [col]:

            return false                          # upper left dia

    for i, j in zip (range (row, -1, -1) range (col, -1, -1)):
        if board [i] [j]:
            return false

                                                  # upper right dia
    for i, j in zip (range (row, -1, -1), range (col, len (board))):
        if board [i] [j]:
            return false

    return True


def solve_queens (board, row):
    if row >= len (board):
        print_board (board).
        reture True.
```

```python
    for col in range (len (board)):
        if is - safe (board, row, col):
            board [row][col] = True
            if solve_ queens (board, row + 1):
                return True
            board [row][col] = False

    return False

def eight - queens ():
    board = [[False] * 8 for _ in range (8)]
    solve _queens (board, 0)
```

Result:

Thus the Program was successfully executed & the o/p is verified.