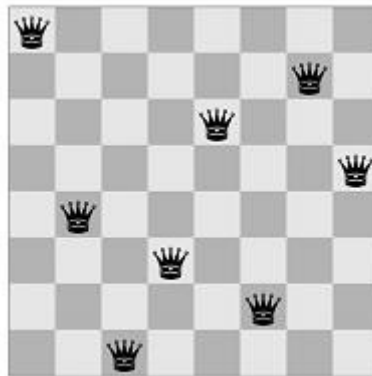


Lab Evaluation Program (For all students) (5 marks)

Submit till (19th April 2021, 11:20 AM)

The N Queen is the problem of placing N chess queens on an N×N chessboard so that no two queens attack each other. The chess queens can attack in any direction as horizontal, vertical, horizontal and diagonal way. Below is the pictorial representation of placement of 8 queens on chessboard.



Write a python program in the following way to implement n-queen problem as state space problem. Create a class nQueen. Write a constructor in the class which takes N as input and prepare the NxN board (initially no queens are placed). Write a function PlaceQueen(x,y) to place a queen on (x,y) location. Please note that PlaceQueen() should follow the constraint that no two queens should attack each other and should not put more than N queens. Write a function FindNoAttackCell(), which finds a cell on the board where no queens are attacking. Write a function DisplayState() which prints the current state of the board. Write a function IsGoalState() to check whether current state is goal state or not.