**PROBLEM DESCRIPTION**

N - Queens. Problem is to place n - queens on a n x n chessboard such that no queen attacks the other queen by being on the same row, column or diagonal.

**PARAMETERS**

|  |  |  |
| --- | --- | --- |
| ***Parameter*** | ***Description*** | ***Unit*** |
| ***N*** | *Size of chess board (8)* | *-* |

**DECISION VARIABLES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Decision Variable*** | ***Description*** | ***Unit*** | ***Type*** | ***Bounds*** |
| ***Xij*** | *1 if cell (i,j) is occupied with a queen* | *-* | *Binary* | *{0,1}* |

**OBJECTIVE FUNCTION**

**CONSTRAINTS**

1. Only one queen in each row
2. Only one queen in each column
3. At most one queen in each diagonal