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**AI Assignment**

**8-queens problem**

* States: Any arrangement of 0-8 queens on the board or Any arrangement of n queens (0 ≤ n ≤ 8) one per column in the leftmost n columns such that no queen attacks another(i.e. each queen will be assigned a position in a unique column).
* Initial State: No queens on the board.
* Successor Function: Add a queen to an empty field on the board or Add a queen to any square in the leftmost empty column such that it is not attacked by any other queen.
* Search space: chess board with n or fewer queens, each on a  different square.
* Goal test: A state is the goal if it has exactly n queens and no  queen is attacking any other queen.
* Path cost: 0 (we are only interested in the solution).