

AI Assignment - Roll No. 1801110 - NEELABH SHUKLA

8 Queen problem -

1. **State Space** is arrangements of 8 queens on 8 x 8 Matrix.
2. **State transition operator:** Add a queen to any square in the empty column such that it is not attacked by any other queen.
3. **Initial State:** Add a queen to any square in empty column such that it is not attacked by any other queen.
4. **Goal State:** Any of the 92 possible solutions can be a goal state.
5. **Cost function:** Cost incurred will be 1 if we go from valid to valid and if we go to invalid it will be 2. Every solution will be at the same height so cost incurred it will be same for all possible solution.

Code is attached separately.