

Question 2:-

Neighbors state:- returns a list of neighbors of the given state

So to get all the neighbors from a state, we loop through each available block in the state. For each block, we check each cell in the grid to know if placing a block is going to be a legal move. All legal moves are placed in the neighbors list and returned to the caller. and if there are no valid neighbours state, then the current state is duplicated and then added to the neighbours list.

The Random state method:- returns a completely random state.

The random state is selected by choosing a random state for a random number of steps from 1 to 100 and this way, a valid random state would be created all the time.

Get_Score method:- returns the fitness score for this state

Here, the fitness score of the state is based on counting the number of empty cells in the state grid.