1. Link to Existing Game: https://www.proprofsgames.com/wolf-sheep-and-cabbage/
2. Yes, the existing solution does give the solution.
3. Approach (Algorithm): The provided code employs a breadth-first search (BFS) algorithm to explore possible moves from the initial state to the goal state systematically.
4. Optimality of the Algorithm: While BFS guarantees finding the shortest path if step costs are uniform, it may not be optimal in all scenarios due to complexities like large search spaces or non-uniform step costs.
5. Time Complexity: The time complexity of BFS is $O(b^d)$ where b is the average branching factor and d is the depth to the shallowest goal state, which can be challenging to precisely estimate without specific problem details