

## Question 2 (1 point):

Value Iteration Agent against each of the provided agents 50 times

**Against Defensive Agent:** Wins:

42 Losses: 0 Draws: 8 **Against**

**Aggressive Agent:** Wins: 50

Losses: 0 Draws: 0 **Against**

**Random Agent:**

Wins: 50 Losses: 0 Draws: 0

I developed 2 methods to compute and apply optimal policies for a Markov Decision Process (MDP). The `iterate()` method applies value iteration over a predefined number of steps to calculate the optimal value function for all game states by maximizing expected rewards and the `extractPolicy()` method then derives an optimal policy based on the computed value function mapping each state to its best possible action.

Screenshots and live testing you can see in video.