**Blockhead Poker**

**Phase 2: Building a Better AI**

In this assignment, we are requested to build a better AI that will beat the Alpha AI using some fuzzy logic via random numbers. To do that, what I did was to somehow predict the face-down card of the opponent player using the random number generator. This method is a bit risky since the guess can be far away from the actual card but it is working for most of the cases. In BetaPlayer.getBet(), according to hidden card guess, the Beta AI sets the bet randomly. If the new delta value is bigger than 5, then it bets a random number bigger than 6 and for other cases a similar approach is used.

To test if the Beta AI is better than the Alpha AI, I have added a “MC” (Monte Carlo) command that a user can input to the program. The MC command creates an Alpha and a Beta AI player, makes them play the game a hundred times and keeps track of the winner. According to results, It is obvious that the Beta AI beats the Alpha AI as can be seen from the screenshot below.

