Abstract/summary

In this project we create an intelligent system to determine what is the best strategy to win at Las Vegas Board Game.

Problem to solve/Introduction

We want to program an intelligent system able to define what is the best strategy in order to win at Las Vegas Board Game.

The system should consider all the rules of the game and the different heuristics that we program. With the heuristic the system should determine which is the best one, then the next one, and so on.

Rules of the game

The game consists in 5 players trying to collect as much money as possible from the casinos.

Set for each round:

* The banknotes are placed in each casino until they have at least 50,000.
* Each player will have 8 dices of one color.

In your turn roll all your dices and select a set of dice with a single number. Put that set in the corresponding casino. When you run out of dice, pass your turn.

On each casino the player with the most dice receives the highest banknote. In case there are more banknotes, the second place receives the next high banknote and so on.

The game continues for 4 rounds and the winner is the player with the most money. In case of a tie, the winner is the player with the most banknotes.

Experimentation

Heuristics

Alpha: this heuristic will choose the set of dices with the highest amount of dices.

Beta: this one will choose the casino with the highest banknote in order to get at least one high prize.

Gamma: It will choose the casino with the most banknotes, so it will make sure to receive something.

Delta: it will try to outnumber an opponent

Echo: it will try to match an opponent so neither will win the prize.

Results

Conclusion

References