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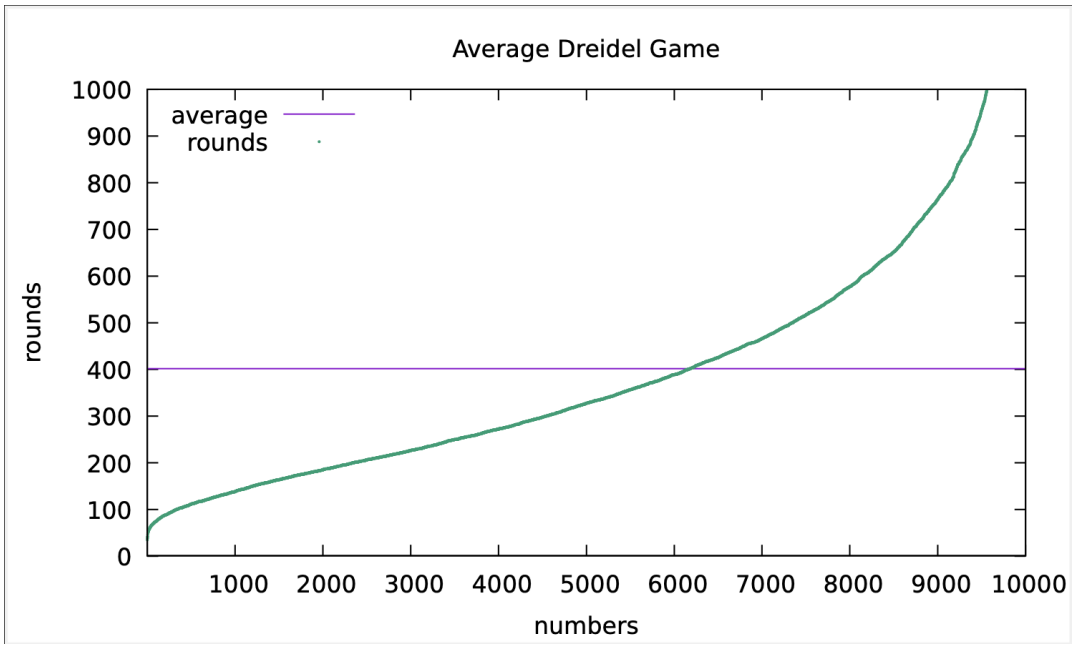
Fall 2022

CSE13S Assignment 3: I Have a Little Dreidel

Programming Analysis:

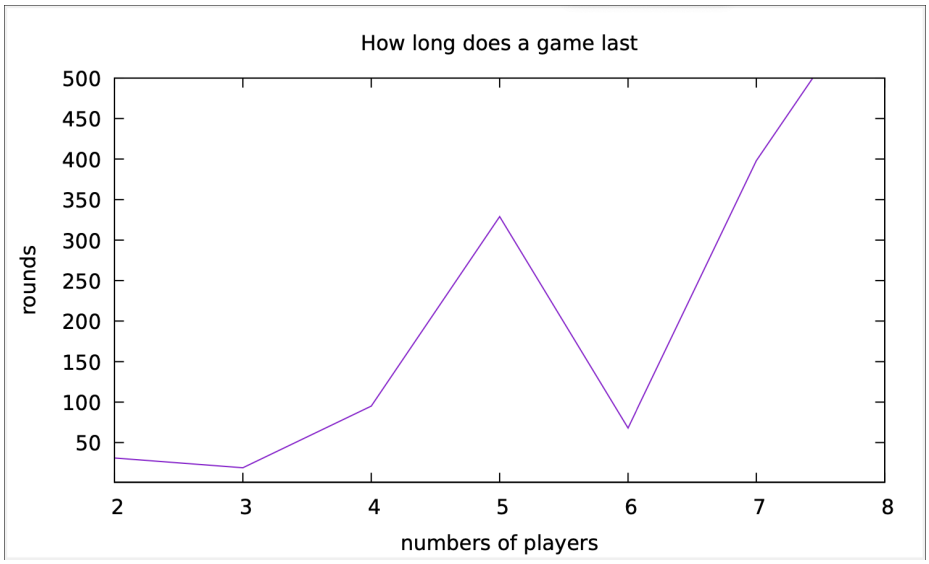
This program implements a centuries-old game of chance, played using a four-sided top known as a dreidel.



On average, how long does a game of *dreidel* with 6 players and 4 coins last? What is the longest game, and what is the shortest game?

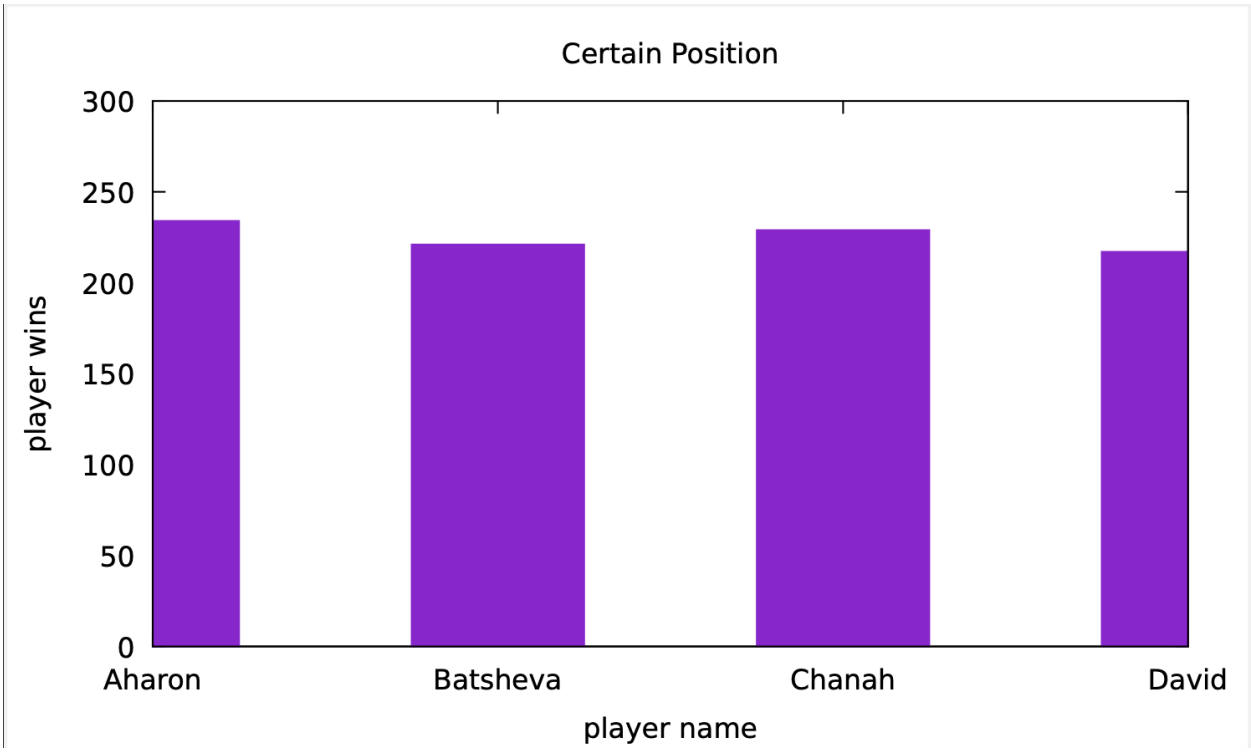
Using Gnuplot, I plotted the average amount of rounds in a game with 6 players and 4 coins to get the value of 400. The longest game seems to last the longest as the seed keeps increasing, and

the longest game would be with the seed of 10000, the shortest game from the graph seems to be with the smallest seed which is 1, and you can see looking at the graph how the number of rounds correlates with the seed number and increases as the seed increases.



If there are more players, does the game last more or fewer rounds? Experiment with 3 coins per player to test your idea.

Using Gnuplot, I played with dreidel with 3 coins to test out how long a game will last from 2 to 8 players. Looking at the graph you can see that the number of rounds increases as there are more players and from that, you can come to the conclusion that the more players there are the longer a game will last



Is there an advantage (or disadvantage) to position in a round? In other words, are players in a particular position more likely to win or lose a game?

I used Gnuplot to plot the frequency of wins, in certain positions. I do not think there is a position that is more likely to win or lose but I do believe that the number of players affects wins. As you can see I went through different seeds to see which players would win more, and you can see that Aharon and Chanah have very similar win numbers. 234 vs 229, and the rest are very close in numbers so I don't think that a certain position is more likely to win a game.