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CSCI 2270

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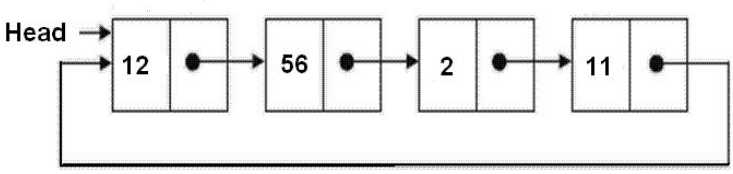
Data Structures Final Project Report

We initially had a few different ideas for this final project. At first we wanted to try out making a weather app, using weather API's and requesting data from external servers. Then we wanted to make a simple database for a summer camp Jack works at, that would help sort campers and whatnot. After throwing around a few more ideas, we figured making Poker (specifically texas holdem) would be a good project that provided some challenges for us, but wouldn't be impossible. It took a while to figure out where to begin but we boiled it down to two main parts. The table and the cards.

The table would consist of a circular linked list of "player" structs. This would obviously represent the circle of players at the table.



The game would deal them cards and they could chose to bet, call, fold, or check based on what their cards were. It was quite complicated to figure out all the loops and stuff required to know how much had been bet, who bet what, if everyone could move on to the next round. We have to constantly check if players run out of money and how many players there are at once.

Then came the cards. We represented the deck of cards as a hash table where we randomly pulled from a list of values (Ace to King) and from a list of suits. These were then fed into the players hands for them to play with. Our last challenge was to compare players hands against each other so that we could determine the winner. We decided to go from the best hand, starting from a royal flush, and look at all the existing hands to see if anyone has one. Then we go from the next highest hand and see if anyone has that. Repeat until we get a hit. That player wins.

And that's about it!

Here is a sample output for a turn:

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IT IS NOW sample's TURN
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Player b: HAS BET: 0
Player c: HAS BET: 0
Player d: HAS BET: 0

You have $1000
The highest bet is $1
Your highest bet is $0


These are the cards on the table
A of spades, Q of hearts, J of clubs, 8 of hearts, 4 of spades


These are the cards in your hand
7 of diamonds, 9 of diamonds


What would you like to do?
1. Fold
2. Call
3. Raise
4. Check
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