12th March, 2024

This week I began with looking over the three different dice games available to choose from and deciding which game I would like to make based on the rules. Based on my general knowledge of programming I can think of a way to approach the LCR dice game right out of the gate. Farkle seems easy enough to do as it is mainly revolving around user input and decision making on whether or not to keep dice for points or to roll them again. Liar’s dice looks like the hardest and that is mainly because I am not aware of the scope of the final. Are all the players human? If so, are they playing on one computer or multiple? If not, is there an AI that plays as the other players? In the event all the players are human and on one computer it feels unintuitive to have a program for anything other than rolling the dice as everything else is left up to the players to bluff one another. I feel this game is meant to be played face to face with actual dice so I am less inclined to choose Liar’s dice.

If I were to approach LCR with what I know about C# I would ask for the player count and for each player's name from left to right as if they were sitting at a table. I do not see if there is an order in which the players roll the dice so I would most likely have the program iterate through the list of players from top to bottom. Each player would be an object containing their name and chip count. The program would check to see if the player has chips and allocate the dice they can use, await a keypress to roll, then display their roll. A description of what occurred will display depending on what actions are taken - ie if chips are moved left right or center, or if chips are kept. Then it is the next player's turn and the process continues until only one player has chips.

Farkle looks to be a dice roll simulator where the player chooses to keep some dice and roll the others for points. For this program, like LCR, I would have the program ask for the number of players and their names and store the players information in objects - these objects containing the players name and points. The program would be based on a command list where the player can choose to roll the dice, keep rolled dice, or move to the next player. Keeping rolled dice would only be available if the dice have been rolled and the rolled dice contains points. Logic checks would be done on each roll to look for point dice and if none are found all dice would be discarded and the next player's turn would start. This would continue until a player wins.

I will need to do more research on how each game plays out to get more fine details covered so that I can create pseudocode for one. As of now both LCR and Farkle’s looks simple enough to do given I can find the C++ equivalent of specific actions I would take in C#. As previously mentioned, more research is needed.

15th March, 2024

After looking at more in depth tutorials on how to play both LCR and Farkle I think I will challenge myself and do Farkle. After watching the video [here](https://youtu.be/PtZlur9Kmb8?si=UY_t0JFA26BUxboN) I gained enough information to understand how the game is played and feel as though I have played Farkle myself in the past but do not fully remember. But what I can understand is that 1’s and 5’s give a set amount of points, three of a kind give 100 times the number rolled other than a set of three 1’s which gives 300 points, no points in a roll loses all points rolled that turn, if all 6 dice are points then they can be rolled again to get more points at the cost of losing all points in a Farkle, 500 points must be attained to get on the scoreboard, and the first to 10,000 wins. While this information was given in the design document it helped in my understanding to have the visual aspect of the video to explain what was going on - like if you roll a 1 and then two more 1’s is that a set of three 1’s or two different sets? They appear to be two sets of different 1’s.

16th March, 2024

Notes:

* Main goes to function for game setup.
  + Asking for number of players and aliases.
* Main loop goes to a method with input validation for a cmd menu.
* CMD menu determines if the player wants to roll, dropout, quit application, and if rolled - roll again or bank score.

PRINT - print to console

READ - read input

WRITE - write to file / variable?

Setup function:

PRINT welcome to Farkle

PRINT how many players will there be today?

READ number of players

PRINT give an alias for each player

FOR all players

PRINT player name

WRITE name in player “profile”

END FOR

PRINT Game will start with Player 1 (alias)

Loop function:

LOOP while input is not close

PRINT What is your command?

PRINT commands (roll / roll again, drop out, quit application, score dice)

READ input command

CALCULATE input command

IF quit application

EXIT switch

ELSE IF roll / roll again

IF has score

Roll again

ELSE

Roll initial

ELSE IF score dice

IF can score dice

Add dice score to player score

ELSE IF drop out

PRINT Player quits the game

REMOVE player from game list

EXIT switch

ELSE IF quit application

PRINT application closing…

EXIT switch

END IF