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"Aggies do not lie, cheat, or steal, or tolerate those who do."
"I have not given or received any unauthorized aid on this assignment."
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Section: ENGR-102-569
Assignment: Project Plan
Date: 19 November 2021

Motivation

These are three games that Brandon and Huy genuinely just enjoy playing. These friends thought it would be cool to look at the games from a programming perspective and see what challenges would come up. All three are relatively simple games, and they were curious just how hard it would be to program these games. There was no real alternative motive besides the fact that we thought they would be fun easy games.

Hierarchy

Main Program

1. Display the Main Menu
2. Prompt user for input, to choose one of the three games or to quit
    a. Direct the user to new popup window for each game.

War

1. Ask user for the number of players
2. Evenly split the cards between the players
3. Play game
    a. Each player plays a card from the top of their hand
    b. Determine if the game needs to end
    c. Determine which player played the highest card
    d. Determine if there is a tie to break
        i. Determine the players that need to break the tie
        ii. Each of these players play three cards.
        iii. Determine Winner
        iv. Loop through the tie breaker until the tie is broken
    e. Give the winner of the round the cards on the fields
    f. Clear the field
    g. If the number of rounds exceeds 10000, end the game.
4. Determine the winner of the game
    a. The winner is determined by whoever has the greatest number of cards
5. End Game

Simon Says

1. Ask the user what level of difficulty they want to play at, enter a number response
    a. The selected level relates to how many numbers the player needs to memorize, and creates a list
2. The screen then shows the list numbers needed to memorize.
3. The player has three seconds to memorize the list of numbers.
4. Clear the console
5. Player inputs one number at a time.
6. Display the number of incorrect inputs.
7. Asks if the player would like to play again.
8. If the player wants to play again then the game asks which level and the game resets from that point.
9. If the player does not want to play again then the game tells them to have a good day, and then terminates.
10. End Game

Left Center Right

1. Ask the user for the number of players
2. Play Game
    a. If the player has no chips, skip her/his turn.
    b. Roll three dice
        i. If the roll is L, give one chip to the player on the roller's left
        ii. If the roll is R, give one chip to the player on the roller's right
        iii. If the roll is C, the roller will lose one chip.
        iv. Any other roll does nothing.
    c. Determine if there is a winner
        i. If there is no winner, loop through all players again
    d. End Game

Instructions for Each Game

Game 1: War

All players play the top card from their respective hands.

Highest value card wins.

The player that played this card will add all cards played to the end of their deck.

If there is a tie between the highest value, the players that played the tie card will play three additional cards, this third card will determine who will win.

This tie breaking process repeats until a player runs out of cards or the tie is broken.

Game 2: Simon Says

Player inputs a difficulty that must be greater than or equal to 0.

The program will output a sequence of numbers based on the difficulty.

The player will input this sequence in order from memory.

The program will then count how many numbers the player did not remember correctly.

Game 3: Left Center Right

The user will input the number of players.

Each player starts with three chips

For each player, the program will roll three dice.

If one of the three dice rolls a 6, the player will lose one chip.

If one of the three dice rolls a 5, the player will give one chip to the player on his/her right.

If one of the three dice rolls a 4, the player will give one chip to the player on his/her left.

If the dice rolls any other number, do nothing.

If the player does not have any chips do not roll the dice.

A player wins by having all other players have no chips.