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Assignment 1: Left, Right and Center
Design Document

I. Explanation

This program works by first asking users to choose a seed. This is to ensure that for any seed we will have the same output.The next step is to prompt the user with the amount of players. This number can be from 1-14. If either of the inputs have invalid inputs print an appropriate error message and cleanly exit the program. Invalid inputs can be if the number is greater than 32 bytes, the user enters something other than numbers, the number of players is not within the appropriate range.

Once the data is validated the first step is to change the starting point of the `random` function by using `srandom` function. Now do an infinite loop. Check how many players have money. If it is only 1 print win message.In the infinite loop have an inner for loop that loops through the players playing the game. If a player has money they roll. If the roll is a pass do nothing. If roll is left, give money to the player on the left. If roll is right, give money to the player on the right. If the roll is center put money in the center.

II. Pseudocode

```
int8_t finished( arr[], size) {
        winner = -1
        non_zeros = 0
        Iterate from 0 to size(i) {
                If arr[i] > 0{
                        Increment non_zeros and set winner to i
                }
                If non_zeros greater than 1 return -1
        }
}

Int main {
        uint32_t num_players, seed;
        Prompt user to enter seed
        Prompt user to enter number of players
        Do data validation on the user inputs. If data validation is false print exit
        Set Seed to value the user entered
        While (game is in play) {
```

```
                Iterate through all players playing the game and stop if game is finished {
                        If player has money {
                                Iterate from 0 to amount of money if less than 3 else 3 {
                                        If Pass do nothing
                                        If Left give money to person on left
                                        If Right give money to person on right
                                        If Center put money in center pot
                                }
                        }
                }
        }
}
```