Design Document

This document will enable a programmer of my skill level to create a program for
**Assignment 1: Left, Right and Center**

Big picture:

This program is going to simulate a simple boardgame. You will give the program two numbers — a random seed and the number of players — and then the program will immediately print out the outcome of the entire game.

Description of the game:

The game can have anywhere from 1 to 14 players. Each player starts with 3 dollars. On a players turn, depending on how many dollars the player has, the player will roll up to three six-sided dice, each of which can be unfolded and flattened into the following shell:
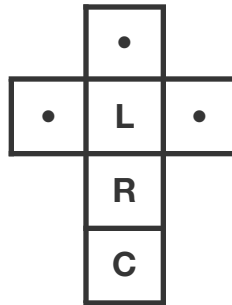
- • → pass (50% chance)

- **L** → donate $1 to the left (16.66% chance)

- **R** → donate $1 to the right (16.66% chance)

- **C** → donate $1 to the center (16.66% chance)

Notice, once dollars have been donated to the center, they stay there for the rest of the game, so all the money will eventually accumulate in the center. Players take turns until someone wins by being the last player to have any dollars remaining.

My concise but sufficient and complete pseudocode:

Get 2 inputs from user: random seed, number of players.
Create an array of "banks".
Put $3 into each of the player's banks.
While there is more than 1 active player, cycle through each active player and do the following:

    Determine how many rolls this player will get
    If zero rolls, skip
    Otherwise, roll 1-3 times
    Get random outcome with rand()
    If PASS, skip
    Otherwise, player donates
    If player now has 0 dollars, there is 1 LESS active player
    If a player had 0 dollars and gets donated to, there is 1 MORE active player
When only one player remains, announce that player as the winner