CS 7A - Spring 2016 - Playing Slips and Grips. Due 3/29/16

In this project you will create a delightful game that is simple and easy to play, even for computers who have no mind to enjoy it with. The game has a player start at square 0 and roll a die (or spin a spinner...it's a computer simulation, after all) to get a random number between 1 and 6, thereby moving that number of squares down the line. The player wins when they roll exactly the number needed to land on square 100. So, for instance, if the player is on square 96 and rolls a 5, nothing happens, other than the number of rolls increases by 1.

1. Run 10000 simulations of this game. What is the average number of rolls it takes to win?

2. Introduce slips and grips into the game. If there's a slip a square N, then your player lands on that square, then she slips back to some earlier square. On the other hand, if there's a grip on square N, then the player is boosted ahead to some square further on down the road. Introduce at least 2 slips and 2 grips into your game and then see how that affects the average number of rolls it takes to win.

3. Introduce forks into the road, so that a player can choose at some juncture to go either left or right. Then play Lip against Rip. Lip always chooses the left fork and Rip always chooses the right fork. Who is the likely winner, Lip or Rip? And how does that depend on the design of your game's track (with various slips and grips, as before)?

   Submit two files: `<your initials>_slipsAndGrips.cpp` with your code and a text file writing up your analysis of the game's questions.