Dice

This assignment was locked Feb 24 at 11:59pm.

Your programs must compile and execute correctly using Visual in the lab environment.

Your job is to write a simple program that plays a dice game.

Ask user to enter a seed value. Get a seed value from the user. If the user types a negative number, seed it with the system time otherwise use the user's seed.

Dice Game Rules:

The player rolls two standard 6-sided dice. These are the rules of a game:

- Game play
  - If the first roll is 7 or 11, then the player win.
  - If the first roll is 2, 3 or 10, 12, then the player loses.
  - If the first roll is 4, 5, 6, 8, 9, that number becomes the target point.
    - At this point, the player continues to roll until he wins or loses.
    - If the player rolls the target point, he wins.
    - If the player rolls a 7, he loses.
    - If the player does not roll either the target or a 7, keep rolling using the current target.
- Scoring and money
  - A player gets $9 when they win a game
  - A player loses $10 when they lose a game
  - A player gets $1 any time they roll a 7.

Game play requirements:

- Display each die value rolled and total after each roll.   For example: **3 and 5 for a value of 8**
- Display the target after the first roll if they don't win or lose.
- Keep track of the player's score (wins and losses and money) and display it after **each game**.
- Print lines -------------------------------------- and the score after EACH game .
- Do not roll the dice until the user types in the character 'r' .   Pressing 'r' rolls the dice one time. Note that 'r' does not play an entire game.
- If the user types 'q', display the current score and the dice game ends.

Utilize a function to get a roll. This function will need to be called twice (once for each of the dice).:

```
int roll ( void )
{
     // code will generate a random number between 1 and 6
    return number;
}
```

Consider making your program modular by using functions

Hints: The random number function will produce the same sequence of random numbers for a given seed.

To make your numbers random every time you run the program, try initializing it only ONE time using the system time as the seed.

Echo out all input. That is, if a user types in any input, print it back out. For example

```
cout << "Enter r to roll\n";
cin >> letter;
cout << letter;
```

When the user types in 'q', display a textual histogram of 50,000 dice rolls. Roll 50,000 times, count the number of 1's, 2's,3's, 4's, 5's, 6's of a single dice roll. In this section, DO NOT display the roll because it will flood the screen with output. Simply display the count for each roll after 50,000 rolls are complete.

Run your program using the seed **614** until you get 20 losses.

Turn in

* textual output of your screen capture - save this in the top level directory of your project
* Zipped file with your entire solution including all required files for building and running your program.

If you get stuck, stare at this image for a while.