

CSC240 - Dice Game using Functions & Parameters in C

Using C, write a simulated dice game. The game requires two six-sided dice. The goal of the game is to be the first player to reach 100 points.

On a turn, a player rolls the die repeatedly until either:

- A 1 is rolled
 - If a 1 is rolled on a single die, that player's turn ends and no points are earned for the turn.
 - However, if "snake eyes" (or double 1's) are rolled, it earns 25 points.
All other doubles earn twice the value on the dice.
- The player chooses to hold (stop rolling).
 - If the player chooses to hold, all the points rolled during that turn are added to his/her score.

Scoring Examples:

Sherri rolls a 3 and a 4 then decides to continue. She then chooses to continue rolling 6 & 6, 6 & 4, 5 & 6, 1 & 2. Because she rolled a 1, Sherri's turn ends and she earns 0 points.

Craig rolls a 6 & 2 and decides to continue. He then chooses to continue rolling 3 & 4, 5 & 5 and then decides to hold. Craig earns 35 points for this turn: $6+2+3+4+2*(5+5)=35$.

Sample Output:

```
Player1 score: 0
Player2 score: 0
+-----+
Player1 rolls 4 and 2. Your total for this turn is 6.
    Do you want to roll again (Y/N)? y

Player1 rolls 2 and 5. Your total for this turn is 13.
    Do you want to roll again (Y/N)? y

Player1 rolls 1 and 1. Your total for this turn is 38.
    Do you want to roll again (Y/N)? n

Player2 rolls 3 and 4. Your total for this turn is 7.
    Do you want to roll again (Y/N)? y

Player2 rolls 4 and 3. Your total for this turn is 14.
    Do you want to roll again (Y/N)? y

Player2 rolls 3 and 4. Your total for this turn is 21.
    Do you want to roll again (Y/N)? y

Player2 rolls 3 and 1. Your total for this turn is 0.

Player1 score: 38
Player2 score: 0
+-----+
Player1 rolls 1 and 1. Your total for this turn is 25.
    Do you want to roll again (Y/N)? y

Player1 rolls 2 and 6. Your total for this turn is 33.
    Do you want to roll again (Y/N)? n

Player2 rolls 6 and 5. Your total for this turn is 11.
    Do you want to roll again (Y/N)? y

Player2 rolls 3 and 5. Your total for this turn is 19.
    Do you want to roll again (Y/N)? y

Player2 rolls 5 and 6. Your total for this turn is 30.
    Do you want to roll again (Y/N)? n

Player1 score: 71
Player2 score: 30
+-----+
```

Generating a Random Numbers:

```
#include <stdlib.h>          // NULL constant, srand() & rand() functions
#include <time.h>            // access your computer's clock time

// seed the random number generator using the computers clock
srand( (unsigned)time(NULL) );

// generate a random number between 0 & 10
int num = rand( ) % 11;
```

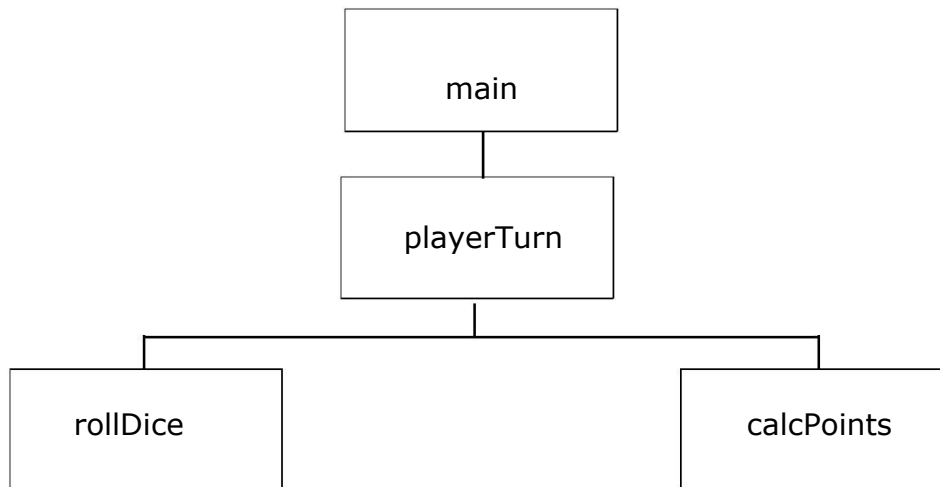
Program design:

Use top-down design to break the game into at least 3 different functions / tasks (not counting main).

This should include:

- At least one void function
- At least one value returning function
- At least one function that passes pointers as parameters

For example:



Submit .c file through Canvas Dropbox.