Project 1

Craps Game

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Introduction

For this projected I decided to make the game of craps. The game of craps is a simple game using two dice and your own money. In my program I have you start with a default amount of a hundred dollars and from there you can place any bet you want to as long as it meets the minimum requirement of a dollar. Throughout the game the program gives out numbers using the random seed and library simulating a pair of dice. The program also adds the two numbers together to get a total which is the number being used to process if you win or lose. The winning numbers in this program are 7 and 11. So, for example, if the player rolls the dice and the sum or total of the pair add up to 7 or 11 then the player win's double what he or she bet. However, if the player rolls a 2, 3, or 12 then the player losses the money he or she bet. If the player rolls any other number besides the ones that are designated winners or losers than the program repeats till he or she wins or losses. The game only stops if you lose all your money, just like in real life.

Lines of Code: 121

Concepts out the text: 6

Variables: 6

Summary

You start the program with the title and it asking you to enter your name.

```
              *Welcome to the game of Craps!!*
****************************************************************
Please enter your name first name:
```

After you input your name you are presented with the amount you are given and given the option to bet an amount minimum of a dollar.

```
              *Welcome to the game of Craps!!*
****************************************************************
Please enter your name first name:
Antonio
Hello Antonio you currently have $50.00
Place your bet and roll the dice (minimum $1):
```

After you input an amount the program rolls a pair of dice for you and sums up the numbers to tell you if you won, lost, or neither and you continue the game till you lose all your money.

```
               *Welcome to the game of Craps!!*
**********************************************************************
Please enter your name first name:
Antonio
Hello Antonio you currently have $50.00
Place your bet and roll the dice (minimum $1):
25
You bet $25.00
 You rolled a 5 and a 6 for a total of 11
 You've won
Hello Antonio you currently have $75.00
Place your bet and roll the dice (minimum $1):
75
You bet $75.00
 You rolled a 3 and a 6 for a total of 9
Antonio you currently have $75.00 on hand.
Place your bet and roll the dice (minimum $1):
```

Here's an example of what happens when you lose all your money and how the program shuts off automatically.

```
               *Welcome to the game of Craps!!*
**********************************************************************
Please enter your name first name:
antonio
Hello antonio you currently have $50.00
Place your bet and roll the dice (minimum $1):
50
You bet $50.00
 You rolled a 1 and a 2 for a total of 3
You've lost
 Looks like you ran out of money. Come back soon!

RUN FINISHED; exit value 0; real time: 9s; user: 0ms; system: 0ms
```

Pseudo Code

Initialize
Player types First Name and hits the return key
Displays Player's current money
Player types in their bet then hits the return key

While bet greater than 1 and bet greater than money then the program continues
If bet less than 1 then the program repeats to the bet option
If bet greater than money then the program repeats to the bet option

Random numbers are chosen and added

If dice equals 7 or 11 then you win double the money you bet
Adds bet to your money

Else if dice equals 2, 3, or 12 you lose and lose the lose the money you bet
Subtracts bet from money

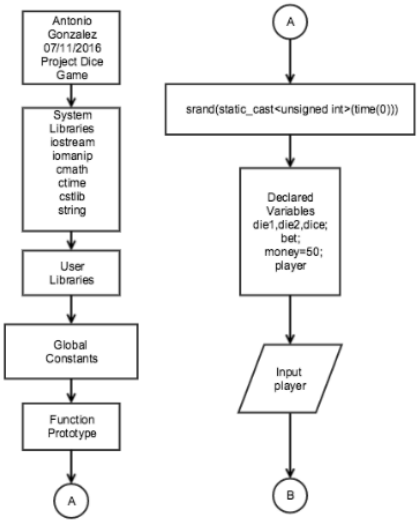
Else Player's current money displays
While bet greater than 1 and bet greater than money then the program continues
If bet less than 1 then the program repeats to the bet option
If bet greater than money then the program repeats to the bet option

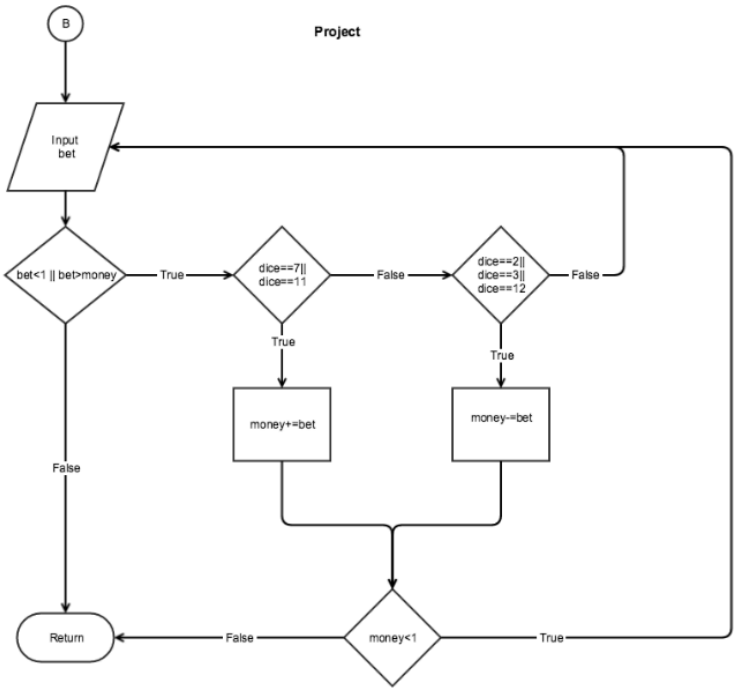
While money less than 1 program stops

Concepts

Six concepts where used in my programing from lecture and the text. Two concepts I used more than the others were do while loops and if/else statements. The do while loops were used for the program to continue its path if the player still had enough money to bet the minimum. The if /else statements where used in order to decide what numbers are winning numbers and which are not. A two other concepts I use in the program where the cstdlib and ctime in order for the program to stimulate a throwing of a pair of dice. The remaining other two concepts I used where the the iomanip library for players to be able to enter cents and the last concept I used was the string concept which helped store the players real name in the program as a string and display it as he/she spelled it.

Flow Chart


Antonio
Gonzalez
07/11/2016
Project Dice
Game
System
Libraries
iostream
iomanip
cmath
ctime
cstlib
string
User
Libraries
Global
Constants
Function
Prototype
A
A
srand(static_cast<unsigned int>(time(0)))
Declared
Variables
die1,die2,dice;
bet;
money=50;
player
Input
player
B


B
Project
Input
bet
bet<1 || bet>money
True
dice==7||
dice==11
False
dice==2||
dice==3||
dice==12
False
True
True
money+=bet
money-=bet
False
Return
False
money<1
True

Code

```
/*
 * File:   main.cpp
 * Author: Antonio Gonzalez
 * Created on July 6, 2016, 12:51 PM
 * Purpose:  Dice Game
 */

//System Libraries
#include <iostream> //Input Output
#include <iomanip>  //Formating Library
#include <cstdlib>  //Random Seed
#include <ctime>    //Time
#include <string>   //String Library

using namespace std;
int main(int argc, char** argv){
 //Set the random number seed
  srand(static_cast<unsigned int>(time(0)));

//Declared Variables
int die1,die2,dice; //Dice numbers
float bet;          //Amount of bet
float money=50;     //Amount started with
string player;      //Name of player

//Output/Input Data
cout<<setprecision(2)<<fixed<<showpoint;
cout<<"             *Welcome to the game of Craps!!*                  "<<endl;
```

```
cout<<"*****************************************************************"<<end
l;
cout<<"Please enter your name first name: "<<player<<endl;
cin>>player;

//Start of the loop for betting
do{
   cout<<"Hello "<<player<<" you currently have $" <<money<<endl;
   cout<<"Place your bet and roll the dice (minimum $1): "<<endl;
   cin>>bet;

   while (bet<1 || bet>money){

      if (bet<1)
      cout<<"Don't be so cheap put some money on the table!"<<endl;
      if (bet>money)
      cout<<" You don't have that much!"<<endl;
      exit(1);

      }

   cout<<"You bet $"<<bet<<endl;

//dice roll
   die1=rand()%6+1;
   die2=rand()%6+1;
   dice=die1+die2;

   cout<<" You rolled a "<<die1<<" and a "<<die2
   <<" for a total of "<<dice<<endl;
```

```
    //Winning numbers 7 & 11
    if (dice==7||dice==11){
       cout<<" You've won"<<endl;
       money+=bet;      //Equation for winning money
       }

//Loosing numbers 2,3,12
    else if (dice==2||dice==3||dice==12){
       cout<<"You've lost"<<endl;
       money-=bet;      //Equation for losing money
       }


    else{
          //Loop for betting
          do{
             cout<<player<<" you currently have $"<<money<<" on hand."<<endl;
             cout<<"Place your bet and roll the dice (minimum $1): "<<endl;
             cin>>bet;
             while (bet<1 || bet>money){
             if (bet<1)
             cout<< " Need the minimum. Take a chance!"<<endl;
             if (bet>money)
             cout<<" You don't have that much!"<<endl;
             cout<<" Place your bet (minimum $1): "<<endl;
             cin>>bet;
             }
             cout<<"You bet $"<<bet<<endl; //end betting loop

             //Dice
```

```
            die1=rand()%6+1;
            die2=rand()%6+1;
            dice=die1+die2;

            cout<<" You rolled a "<<die1
            <<" and a "<<die2
            <<" for a total of "<<dice<<endl;

            //Wining Numbers 7,11
            if (dice==7||dice==11){
               cout<<" YOU WON!!!! lets raise the Stakes"<<endl;
               money+=bet;
               }
           //Losing numbers 2,3,12
            if (dice==2||dice==3||dice==12){                  //Loser
               cout<<" YOU LOSE its ok you can WIN it back"<<endl;
               money-=bet;
               }

            else{
               cout<<" Keep going!! Roll a 7 or 11 to win!"<<endl;

               }
            //Loosing numbers 2,3,12
             }while (dice!=2 || dice!=3||dice!=12);
   }
  //If money goes to 0 then you lose and game stops
} while(money<1);
   cout<<" Looks like you ran out of money. Come back soon!"<<endl;

  return 0;
```

}