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/*
File:   main.cpp
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Created in 2017
Purpose:  Pseudo code for roulette game
*/

//System Libraries
//Input Output library
//Random numbers
//Time to set the Seed
//String Functioning
//Math Library
//Precision library
//Read Write Library
//File stream library
//Format Library

//Namespace std of system libraries

//User Libraries
//Global Constants
//Such as PI, Vc, -> Math/Science values
//as well as conversions from system of units to another
//Percentage Conversion
//Million
//100,000

//Function Prototypes

//Main -> Executable code begins here!!!

    //Set the random number seed
```

```
 //Declare Variables and Initialize

    //int for guesses, floats for ratios
    //char and string for choices
    //Set Constants for limits
    //Counters/indicators initialize for wins, loss, and $

//Intro
   //Instantiate and Open files for header
   //Retrieve and Display Header
   //Close file
   //Get Player Name
   //Explain betting system
   //Display Menu
      //Choose Game Type

//Play By Color
   //Explain Gain/Loss
   //Ask User to Bet on Black or Red
   //Validate Input
   //Play by Do While Looping
      //Randomize Choice
      //Compare Choice
      //If Win
         //Display Winning Message
         //Add Dollar to Bank
         //Add 1 to Win Tally
         //Add 1 to Games Tally
         //Display Bank Total
      //Else Lose
         //Display Losing Message
```

```
            //Subtract Dollar From Bank
            //Add 1 to Loss Tally
            //Add 1 to Games Tally
            //Display Bank Total
            //If Money = 0
               //Display Bankrupt Message
               //Break! End Game
         //Play Another Game.
         //Validate Input
         //Do While Loop Ends Game With -1

//Play By Number
   //Explain Gain/Loss
   //Ask User to How Many Plays on This Spin
   //Validate Input
   //Play by Do While Looping
      //Ask for Number of Plays on This Spin
      //Validate Input
      //Generate Random Number Between 0-37
      //Initiate For Loop for Number Guess
         //Choose Number
         //Validate Input
         //Compare Choice To Random Number
         //If Win
            //Display Win Message
            //Add $40 to Bank
            //Add 1 to Play Tally
            //Add 1 to Win
            //Display Bank Total
         //Else Lose
            //Display Loss Message
            //Subtract Dollar from Bank
```

```
            //Add 1 To Loss Tally
            //Add 1 to Play Tally
            //If Money = 0
               //Display Bankrupt Message
               //Break! End Game
         //Display Winning Number
         //Do While Loop Ends With -1 Entry

//Validate Menu Entries
   //Display Thank You For Coming Message

//Ratios
   //Algebraic and Static Expressions for Answers

//Output Data
   //Set Precision for floats
   //Display Win Total
   //Display Loss Total
   //Ask For Ratio Display
   //Switch Menu for Ratio Display
      //W Displays Win vs Plays
      //L Displays Loss vs Plays
      //O Displays Win Over Loss
      //T Displays All Three
   //Display Ending Bank Balance
   //Display Come Again Message

//Write File
   //Open Output File
   //Output Win Total In Output File
   //Output Loss Total In Output File
   //Output Win Ratio In Output File
```

```
   //Output Loss Ratio In Output File
   //Output Win/Loss In Output File
   //Output End Balance In Output File
   //Close File

//Exit!!!
```