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1  /*****
2  * Program Name:      Craps v951.2129 (craps.exe)
3  * Course:           CIS-61, C++ Language Programming
4  * Instructor:       C. Polen
5  * Project:          Assignment 2
6  * Created Date:     September 14th, 2010
7  * Due Date:         September 24th, 2010
8  * Created By:       Chad Philip Johnson
9  * Purpose:          Play a crappy game of craps
10 * Editor/IDE:       Notepad++
11 * Resoluton:        1024x768
12 * Compiler:         MinGW C++
13 * Acknowledgements: None
14 *****/
15
16 #include <iostream>
17 #include <conio.h> //for getch()
18 #include <cstdlib> //for rand() and srand() functions
19 #include <ctime>
20 using namespace std;
21
22 int          intDie01, intDie02; //Declare global variables
23 int          intDieTotal;
24 char         chrPlayGame;
25
26 void         fncRollTheDice(); // Declare global functions
27
28 /*****
29 * Function Name:     main()
30 * Parameters:        None
31 * Return Value:      int
32 * Purpose:           Main program
33 *****/
34
35 int main()
36 {
37
38     srand( time(NULL) ); //Initiate random seed
39
40     int          intPlayerPoint;
41
42     cout << endl << endl << "Welcome to the dice games \"Craps\!" << endl << endl; //Description of the game and rules
43     cout << "The rules:" << endl;
44     cout << "1) You will roll two dice." << endl;
45     cout << "2) If the total of the two dice is 7 or 11 on the first roll, you win." << endl;
46     cout << "3) If the total is 2, 3 or 12 on the first roll, this is called \"craps\"," << endl;

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47     cout << "    and the house wins." << endl;
48     cout << "4) If the sum is 4, 5, 6, 8, 9, or 10 on the first roll, then that sum becomes" << endl;
49     cout << "    your \"point\" and you must continue rolling until you \"match the point\"." << endl;
50     cout << "5) Finally, if you roll a 7 before matching the point, you lose and the house" << endl;
51     cout << "    takes all of your money." << endl << endl;
52
53     cout << "Would you like to play? (y/n) "; //Prompt user if he/she would like to play
54     cin >> chrPlayGame;
55
56     if (chrPlayGame != 'n' && chrPlayGame != 'N') { //Only exit the program if the player answers "n" or "N"
57
58         do {
59
60             fncRollTheDice(); //Function for rolling dice, assigning values and communicating results (see below)
61
62             //Player wins automatically if first roll is 7 or 11
63             if (intDieTotal == 7 || intDieTotal == 11)
64                 cout << endl << "Congratulations! You win!" << endl << endl;
65             //Player loses automatically if first roll is 2, 3 or 12
66             else if (intDieTotal == 2 || intDieTotal == 3 || intDieTotal == 12)
67                 cout << endl << "Sorry, you lose!" << endl << endl;
68             else {
69                 //An initial roll that is not 7, 11, 2, 3, or 12 becomes the player's point that must be matched
70                 //with a subsequent roll to win
71                 intPlayerPoint = intDieTotal;
72
73                 do {
74                     fncRollTheDice(); //Continue to roll the dice against the point (win) and 7 (lose)
75                 } while (intDieTotal != intPlayerPoint && intDieTotal != 7);
76
77                 //If roll matches the point number, the player wins
78                 if (intDieTotal == intPlayerPoint)
79                     cout << endl << "Congratulations! You win!" << endl << endl;
80                 //If roll matches 7, the player loses
81                 else
82                     cout << endl << "Sorry, you lose!" << endl << endl;
83                 }
84
85                 cout << "Would you like to play again? (y/n) "; //Prompt to play again
86                 cin >> chrPlayGame;
87
88                 } while (chrPlayGame != 'n' && chrPlayGame != 'N'); //Loop the game until the player decides this is really boring and
89                 stops
90         }
91
92     return 0;
93
94 }
95

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96  /*****
97  * Function Name:      fncRollTheDice()
98  * Parameters:       None
99  * Return Value:     None
100  * Purpose:          Roll the digital dice, calculate the total of both die values and communicate the results to the player
101  *****/
102
103  void fncRollTheDice()
104  {
105
106      intDie01      = (rand() % 6) + 1; //Add 1 to the random number generator
107      intDie02      = (rand() % 6) + 1; //rand() starts at 0, which is an invalid value for a die
108
109      intDieTotal   = intDie01 + intDie02; //Calculate the total of the roll
110
111      cout << endl << "You rolled a " << intDie01 << " and a " << intDie02 << " for a total of " << intDieTotal << "." << endl;
112      cout << "Press any key to continue..." << endl;
113      getch(); //Pause to display the results until user presses any button to continue
114
115  }
116
```