**Lab 4:**

Code:

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// Programming Assignment: LAB04

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// Date Written: 07/31/2019

// Purpose: Flip A Coin Program

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#include <iostream>

#include <ctime>

//Prototyping

void flipCoin(int numToss);

void rollDice(int numSide, int numRoll);

void menu();

//Main Function

int main() {

//seed random num gen

unsigned seed = time(0);

srand(seed);

std::cout << "Welcome to your game!";

std::cout << "You can choose to flip a coin or roll a die! Fate is in your hands... \n";

std::cout << "So lets begin! \n";

std::cout << " \n";

menu();

return 0;

}

//menu to go back through and play another game or to exit.

void menu() {

//declare numToss, numSide, userchoice

std::string userChoice;

int numToss, numSide, numRoll;

std::cout << "Would you like to (C) Flip a Coin, (D) Roll a Die or (E) Exit: \n";

std::cin >> userChoice;

if (userChoice == "C") {

std::cout << "How many times would you care to flip the coin? \n";

std::cin >> numToss;

flipCoin(numToss);

}

if (userChoice == "D") {

std::cout << "How many sides does your die have? \n";

std::cin >> numSide;

std::cout << "How many times would you care to roll the die? \n";

std::cin >> numRoll;

rollDice(numSide, numRoll);

}

else

{

std::cout << "Goodbye \n";

}

}

//Flip a coin game

void flipCoin(int numToss) {

int side1 = 1, side2 = 2, i;

std::string topSide = "Heads", bottom = "Tails";

for (i = 0; i < numToss; i++) {

if ((int)(1 + rand() % 2) == side1) {

std::cout << "Flip " << i + 1 << ":\t " << topSide << std::endl;

}

else

{

std::cout << "Flip " << i + 1 << ":\t " << bottom << std::endl;

}

}

menu();

}

//roll a dice function

void rollDice(int numSide, int numRoll) {

int i;

for (i = 0; i < numRoll; i++) {

std::cout << "Roll " << i + 1 << " :\t " << (int)(1 + rand() % numSide) << "\n";

}

menu();

}

Screenshot:

