

Project 5: Rock, Paper, Scissors

Background:

Rock, Paper, Scissors is an old boring game where opponents throw hand gestures with each in a timely fashion to compete. The game consists of three choices, where Rock beats Scissors, Scissors beats Paper and Paper beats Rock.

Details:

For this project, I've written an incomplete version where you'll play against a computer that generates a random number. The generation of the number and the user input are given, your task is to keep score.

Requirements

For this project you are required to use Structs to correlate to the human player and for the computer player. The struct must contain an integer array, size three, to keep score of wins, loses, and ties for that individual player. You must also use at least 1 enumerated type for either choices and/or categories (viewer header file).

Header File - game.h

```
#include <iostream>
#include <string>
#include <cstdlib>
#include <ctime>

using namespace std;

struct player {
    string name;
    // something is missing
};

enum choices { ROCK, PAPER, SCISSORS, BAD_CHOICE };

enum categories { WIN, LOSE, TIE };

void init(player& play); // initializes the score of the players
void stats(ostream& out, player& play, player& comp); // prints off the score for both players
void clear(); // Don't worry about this
void win(player& play); // Increases a win for a player
void lose(player& play); // Increases a lose for a player
void tie(player& play); // Increases a tie for a player
```

Source File - game.cpp

```
#include "game.h"

int main()
{
    srand((unsigned)time(0));

    player play;
    player comp;
    comp.name = "Compy";
```

```

init(play);
init(comp);

// prompt
cout << "Welcome to Rock/Paper/Scissors for cs 1044."<< endl;
cout << "Please enter your name: ";

cin >> play.name;

clear();

while (1)
{
    clear();
    stats(cout, play, comp);

    string shot;
    choices shot_int = (choices)0;
    choices number = (choices)0;

    cout << "rock/paper/scissor: ";
    cin >> shot;

    if ( shot == "q" || shot == "quit") break;

    number = (choices)(rand()%3); // computer's random number generator

    cout << endl;
    cout << "The Computer shot: ";

    // determine number here;

    // determine shot here;

    if ( number == shot_int)
    {
        // player and computer shot the same
    }
    else if ( number == ROCK)
    {
        // computer shoots rock
    }
    else if ( number == PAPER)
    {
        // computer shoots paper
    }
    else if ( number == SCISSORS)
    {
        // computer shhots scissors
    }

    cout << endl << endl;
    cout << "Continue? (y/n): ";
    string input = "";
    cin >> input;
    if (input == "n" || input == "no") break;
}

```

```

    }

    return 0;
}

// initializes the player's scores
void init(player& play)
{}

// prints off scores
void stats(ostream& out, player& play, player& comp)
{}

// I learned this from CS 3204 =>
void clear()
{
    system("cls");
}

// what to do for a win
void win(player& play)
{}

// what to do for a loss
void lose(player& play)
{}

// what to do for a tie
void tie(player& play)
{}

```

Submission

As always, you will submit your source file (.cpp) to the curator. Output will be posted soon. Please consider the Honor Code.

Honor Code

Place this in the bottom of your file in comments

```

// - I have not discussed the C++ language code in my program with
// anyone other than my instructor or the teaching assistants
// assigned to this course.
//
// - I have not used C++ language code obtained from another student,
// or any other unauthorized source, either modified or unmodified.
//
// - If any C++ language code or documentation used in my program
// was obtained from another source, such as a text book or course
// notes, that has been clearly noted with a proper citation in
// the comments of my program.
//
// - I have not designed this program in such a way as to defeat or
// interfere with the normal operation of the Curator System.
//
// <Student Name>

```