Rock Paper Scissors Lizard Spock

Logic

5 buttons, one each representing rock, paper, scissors, lizard, spock

1 = rock

2 = paper

3 = scissors

4 = lizard

5 = spock

1-player method:

User selects one button and the computer generates a random choice. Computer’s choice is compared to user choice to determine winner.

First player to win three times is the winner.

2-player method:

Same as 1-player method except with 2 human players.

Program

RpslsGame myRpslsGame = new RpslsGame();

myRpslsGame.players.SetPlayers();

myRPslsGame.rpslsgame.PlayGame();

**Class:** RPSLSGame

Member variables

Player 1 (human)

Player 2 (human or computer) (Q: how do you ensure choices are simultaneous?) (Q2: How do you get a second player involved at all?)

gameScore

List<string> gestureOptions = new List<string>():

gestureOptions.Add(“rock”);

gestureOptions.Add(“paper”);

gestureOptions.Add(“scissors”);

gestureOptions.Add(“lizard”);

gestureOptions.Add(“Spock”);

Constructor

Member methods

SetPlayers

Play Game

Call player.selectOption

DisplayChoices

C.WL(player + “ selected “ + option + “.”)

for(

DetermineRoundWinner (see below)

DetermineGameScore

If fewer than 3 games have been won, call PlayRound

**Abstract Class:** Player

Member variables

name();

playerScore();

when win score +1

After each round, Console.WriteLine score

Game ends when one player reaches 3.

Child class: Human player (select choice)

Child class: Computer player (random choice)

{

Random random = new Random();

//Constructor Return random.Next(min, max)

}

This method takes two arguments.

First argument is inclusive

Second argument is exclusive

=<lower value; <upper value

Int returnValue = RandomNumber(1,4)

Constructor (no constructor b/c abstract classes can’t be instantiated)

Member Methods

SelectOption (public abstract void SelectOption();)

Call DetermineRoundWinner

Class Player: Human Player

Variables

(inherited from parent)

Constructor

Public Player1

Methods

Class Player: AI Player

Variables

Constructor

Methods

Takes turn (Or put this in round class?)

DetermineRoundWinner

If (player1.gesture == player2.gesture)

Console.WriteLine(“It’s a tie!”);

CheckScore();

nextRound();

elseif(player1.gesture == 1 && player2.gesture == 2 or 5)

Console.WriteLine(Player2 + “wins!”);

player2Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 1 && player2.gesture == 3 or 4)

Console.WriteLine(Player1 + “wins!”);

Player1Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 2 && player2.gesture == 3 or 4)

Console.WriteLine(Player2 + “wins!”);

player2Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 2 && player2.gesture == 1 or 5)

Console.WriteLine(Player1 + “wins!”);

Player1Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 3 && player2.gesture == 1 or 5)

Console.WriteLine(Player2 + “wins!”);

player2Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 3 && player2.gesture == 2 or 4)

Console.WriteLine(Player1 + “wins!”);

Player1Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 4 && player2.gesture == 1 or 3)

Console.WriteLine(Player2 + “wins!”);

player2Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 4 && player2.gesture == 2 or 5)

Console.WriteLine(Player1 + “wins!”);

Player1Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 5 && player2.gesture == 2 or 4)

Console.WriteLine(Player2 + “wins!”);

player2Score++;

CheckScore();

nextRound();

elseif(player1.gesture == 5 && player2.gesture == 1 or 3)

Console.WriteLine(Player1 + “wins!”);

Player1Score++;

CheckScore();

nextRound();

else

Console.WriteLine(“Selection not valid. Please try again.”)

Console.ReadLine();

nextRound();

===============================================================================

Welcome text: (Display at beginning of game but also include as a help screen?)

Welcome to Rock, Paper, Scissors, Lizard, Spock, a fun derivation of the popular childhood game, popularized by the TV show, Big Bang Theory. Here’s how to play:

Enter your name in the beginning. At the beginning of each round, you will be prompted to choose between the five options: rock, paper, scissors, lizard, or Spock. Use the number keys on your keypad to make your choice:

1 = rock

2 = paper

3 = scissors

4 = lizard

5 = Spock

Both your choice and that of your opponent will be revealed on the screen. The winner is determined as follows:

Scissors cuts paper

Paper covers rock

Rock crushes lizard

Lizard poisons Spock

Spock smashes scissors

Scissors decapitates lizard

Lizard eats paper

Paper disproves Spock

Spock vaporizes rock

Rock crushes scissors

The winner of the round will be displayed.

The first person to win three rounds wins the game. Good luck and enjoy!