

Homework 02

Rock Paper Scissors!

Due 09/29/2023 by 11:55PM

Objective:

Write a program that simulates a game of rock, paper, scissors between a human and a computer opponent in best 2 out of 3 rounds.

Requirements:

- Functionality. (80pts)
 - No Syntax, Major Run-Time, or Major Logic Errors. (80pts*)
 - *Code that cannot be compiled due to syntax errors is nonfunctional code and will receive no points for this entire section.
 - *Code that cannot be executed or tested due to major run-time or logic errors is nonfunctional code and will receive no points for this entire section.
 - Clear and Easy-To-Use Interface. (10pts)
 - Users should easily understand what the program does and how to use it.
 - Users should be prompted for input and should be able to enter data easily.
 - Users should be presented with output after major functions, operations, or calculations.
 - All the above must apply for full credit.
 - Determine the Winner of a Round. (20pts)
 - The user must select either “Rock”, “Paper”, or “Scissors”.
 - The computer opponent must randomly select either “Rock”, “Paper”, or “Scissors” each round.
 - A winner must be determined by examining the user’s input and the computer’s selection.
 - Rock vs Paper = Paper Wins.
 - Paper vs Scissors = Scissors Wins.
 - Scissors vs Rock = Rock Wins.
 - Each winner receives 1 point.
 - In the event of a tie there is no winner, and no points are awarded.
 - If the user enters an incorrect value, then the computer automatically wins that round and receives a point.
 - The results of each round must be displayed – either a winner or a tie.
 - All must apply for full credit.
 - Declare an overall Winner or a Tie. (20pts)
 - The program must determine and display an overall winner after exactly 3 rounds via their points.

- In the event of a tie, then the program must display that the user and the computer tied.
 - All must apply for full credit.
- Replay the Game. (20pts)
 - Once the 3 rounds have concluded, the program must ask the user if they would like to play again.
 - If the user answers yes, then the scores must be reset and the game restarts.
 - Otherwise, the program must terminate.
- Coding Style. (10pts)
 - Readable Code
 - Meaningful identifiers for data and methods.
 - Proper indentation that clearly identifies statements within the body of a class, a method, a branching statement, a loop statement, etc.
 - All the above must apply for full credit.
- Comments. (10pts)
 - Your name in the file. (5pts)
 - At least 5 meaningful comments in addition to your name. These must describe the function of the code it is near. (5pts)

Finally:

Upload the .java file to the CSCE Dropbox