CS 1073

FR03A

Assignment #4

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# Section 1

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import java.util.Scanner;

public class TempApp{

    public static void main(String[] args){

        Scanner scan = new Scanner(System.in);//initialize scanner

        System.out.println("Input your preferred temperature value. (Integers Only)");

        int prefTemp = scan.nextInt();

        //ask user for preferred temp and record and store it

        System.out.println("Now start putting in the outside temperature values.");

        int tempIn = scan.nextInt();

        //starts the input cycle

        //initialize all of the variables that will be used

        int highTemp = tempIn;

        int lowTemp = tempIn;

        int range = 0;

        int count = 0;

        int ave = 0;

        //if an input is higher than 100 the program stops taking inputs

        while (tempIn <= 100){

            ave += tempIn;

            if((tempIn - prefTemp) <= 2 && (tempIn - prefTemp) >= -2){

                //math to see if the input is within 2 degrees of the preferred

                range++;

            }

            if (tempIn > highTemp){

                //takes the highest temp

                highTemp = tempIn;

            }

            if (tempIn < lowTemp){

                //takes the lowest temp

                lowTemp = tempIn;

            }

            count++;//count up

            tempIn = scan.nextInt();//take next input

        }

        System.out.println("Your Temperature report:\n" + count + " temperatures total\n" + range + " temperatures within the preferred range");

        //temp report

        //shows the conservative average if there is 3 or more temps

        if (count >= 3){

            float consAve = (ave - highTemp - lowTemp)/ (count - 2);

            System.out.println("Conservative average temperature: " + consAve);

        }

        else {

            System.out.println("Not enough data to calculate the conservative average.");

        }

    }

}

# Section 2 Graphical user interface, text, application Description automatically generatedGraphical user interface, text, application Description automatically generatedGraphical user interface, text, application Description automatically generated

# Section 3

/\*\*

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import java.util.Scanner;

public class ArcheryApp{

    public static void main(String[] args){

        Scanner scan = new Scanner(System.in);

        int score = 150;

        System.out.println("Did your arrow land within the black circle? (yes/no)");

        String input = scan.nextLine();

        while (!input.equals("no") && !input.equals("yes")){

            System.out.println("Invalid input, try using \'yes\' or \'no\'.");

            input = scan.nextLine();

        }

        System.out.println("What was the arrow made out of?");

        String material = scan.nextLine();

        System.out.println("How far away from the red bullseye did you hit? (in cm)");

        double bullseyeDistance = scan.nextDouble();

        System.out.println("How far away were you standing from the target. (in meters)");

        double personDistance = scan.nextDouble();

        if (bullseyeDistance > 200){

            score -= 100;

        }

        else if(bullseyeDistance <= 200 && bullseyeDistance >= 100){

            score -= 50;

        }

        else if (bullseyeDistance < 50){

            score += 50;

        }

        if (personDistance > 20 && (!material.equals("carbon")) && bullseyeDistance < 200){

            score += 200;

        }

        if(material.equals("wood") || material.equals("fibreglass")){

            score += 50;

        }

        System.out.println("Your score is: " + score);

        if(score < 100){

            System.out.println("You need to improve...");

        }

        else if(score >= 100 && score < 200){

            System.out.println("Your score was OK. Give it another shot!");

        }

        else if (score >= 200 && score < 300){

            System.out.println("Good job! But there is room for improvement still.");

        }

        else{

            System.out.println("Great job!");

        }

    }

}

# Section 4

Text

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