**Critical Thinking 4**

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Pseudocode

Import arraylist

Import scanner

Ask for the day and then the average temperature

Place input into array

Do this seven times

Ask user which day they want to know the temperature of

Display chosen day

Ask if they want to continue

If yes return to asking user which day’s temperature they want to know

else end process

Code

import java.util.ArrayList;

import java.util.Scanner;

public class Temperature {

    public static void main(String[] args){

        Scanner scanner = new Scanner(System.in);

        //set Arrays to store days & temperatures

        ArrayList<String> daysOfWeek = new ArrayList<>();

        ArrayList<Double> dailyTemperatures = new ArrayList<>();

        //input prompts

        for (int i=0; i<7; i++){

            System.out.print("Enter the day of the week: ");

            String day = scanner.nextLine();

            System.out.print("Enter the average temperature for " + day + ": ");

            double temperature = scanner.nextDouble();

            //consume the newline character

            scanner.nextLine();

            //add the day and temperature to the ArrayLists

            daysOfWeek.add(day);

            dailyTemperatures.add(temperature);

        }

        //ask user which day they want to know the temperature

        while (true){

            System.out.print("Enter the day of the week (Monday-Sunday) or 'week' for weekly average: ");

            String input = scanner.nextLine();

            if (input.equalsIgnoreCase("week")) {

                //calculate and display average weekly temperature

                double weeklyAverage = calculateWeeklyAverage(dailyTemperatures);

                System.out.println("Weekly Average Temperature: " + weeklyAverage);

            } else if (daysOfWeek.contains(input)) {

                //display the temperature for the user input day

                int index = daysOfWeek.indexOf(input);

                double temperature = dailyTemperatures.get(index);

                System.out.println("Temperature for " + input + ": " + temperature);

            } else {

                System.out.println("Invalid input. Please enter a valid day or 'week'.");

            }

            //ask user if they wish to continue

            System.out.print("Do you want to check another day or 'week' (yes/no)? ");

            String continueInput = scanner.nextLine();

            if (!continueInput.equalsIgnoreCase("yes")){

                break;

            }

        }

        scanner.close();

    }

    //calculate the average weekly temperature

    private static double calculateWeeklyAverage(ArrayList<Double> temperatures){

        double sum = 0;

        for (double temperature : temperatures){

            sum += temperature;

        }

        return sum / temperatures.size();

    }

}

