

Module 5 Critical Thinking:

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CSC320-1

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# Pseudocode

START

```

    // Define the arrays and variable
    string[] daysOfWeek = {"Monday", "Tuesday", "Wednesday", "Thursday", "Friday",
"Saturday", "Sunday"}
    int[] dayAverageTemperature = {35, 55, 33, 28, 31, 29, 34}

    int weekAverageTemperature
    int tempSumVal = 0
    string userInput
    boolean foundDay = false

    // Prompt user input
    PRINT "Please enter a day of the week or the word 'week':"
    READ userInput

    // Conditional statement to calculate and print the weekly average
    IF userInput EQUALS "week" THEN
        FOR i FROM 0 TO LENGTH(daysOfWeek) - 1
            tempSumVal = tempSumVal + dayAverageTemperature[i]

        weekAverageTemperature = tempSumVal / LENGTH(dayAverageTemperature)
        PRINT "Average temperature for the week: " + weekAverageTemperature

    // Otherwise, check for a specific day
    IF userInput DOES NOT EQUAL "week" THEN
        FOR i FROM 0 TO LENGTH(daysOfWeek) - 1 && foundDay = false
            IF userInput EQUALS daysOfWeek[i] THEN
                foundDay = true
                PRINT "Average temperature on " + daysOfWeek[i] + ": " + dayAverageTemperature[i]

    // Additional logic to address any outlining user input
    IF foundDay IS false THEN
        PRINT "Invalid input. Please enter a valid day (Monday through Sunday) or 'week'."

```

STOP

## Source code

```

package criticalthinkingassignment;

import java.util.Scanner;

public class GetWeeklyTemperatures {
    public static void main(String[] args) {
        Scanner scnr = new Scanner(System.in);

        // Define arrays and variable
        String[] daysOfWeek = { "Monday", "Tuesday", "Wednesday", "Thursday",
"Friday", "Saturday", "Sunday" };
        double[] dayAverageTemperature = { 35, 55, 33, 28, 31, 29, 34 };

        double weekAverageTemperature;
        double tempSumVal;
        String userInput;

        boolean foundDay = false;
        int i;

        System.out.print("Please enter a day of the week or the word 'week': ");
        userInput = scnr.nextLine().trim();

        while (true) {
            // Check if the user wants the weekly average temperature
            if (userInput.equalsIgnoreCase("week")) {
                tempSumVal = 0;
                for (i = 0; i < daysOfWeek.length; ++i) {
                    tempSumVal += dayAverageTemperature[i];
                }
                weekAverageTemperature = tempSumVal / daysOfWeek.length;
                System.out.println("Average temperature for the week: " +
                    weekAverageTemperature + "\u00B0F");
                break;
            }

            // Check if the input matches one of the days
            for (i = 0; i < daysOfWeek.length; ++i) {
                if (userInput.equalsIgnoreCase(daysOfWeek[i])) {
                    System.out.println("Average temperature on " +
                        daysOfWeek[i] + ": " + dayAverageTemperature[i] +
                        "\u00B0F");
                    foundDay = true;
                    break;
                }
            }

            // If a valid day was found, exit the while loop
            if (foundDay) {

```

```

        break;
    }

    // Otherwise, prompt for input again if neither "week" nor a valid day was
    System.out.print("Invalid input. Please enter a valid day (Monday through
    Sunday) or 'week': ");
    userInput = scnr.nextLine().trim();
}
}
}

```

## Code execution

```

1 package criticalthinkingassignment;
2
3 import java.util.Scanner;
4
5 public class GetWeeklyTemperatures {
6     public static void main(String[] args) {
7         Scanner scnr = new Scanner(System.in);
8
9         // Define arrays and variable
10        String[] daysOfWeek = { "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday" };
11        double[] dayAverageTemperature = { 35, 55, 33, 28, 31, 29, 34 };
12
13        double weekAverageTemperature;
14        double tempSumVal;
15        String userInput;
16
17        boolean foundDay = false;
18        int i;
19
20        System.out.print("Please enter a day of the week or the word 'week': ");
21        userInput = scnr.nextLine().trim();
22
23        while (true) {
24            // Check if the user wants the weekly average temperature
25            if (userInput.equalsIgnoreCase("week")) {
26                tempSumVal = 0;
27                for (i = 0; i < daysOfWeek.length; ++i) {
28                    tempSumVal += dayAverageTemperature[i];
29                }
30                weekAverageTemperature = tempSumVal / daysOfWeek.length;
31                System.out.println("Average temperature for the week: " + weekAverageTemperature + "\u00B0F");
32                break;
33            }
34
35            // Check if the input matches one of the days
36            for (i = 0; i < daysOfWeek.length; ++i) {
37                if (userInput.equalsIgnoreCase(daysOfWeek[i])) {
38                    System.out.println(
39                        "Average temperature on " + daysOfWeek[i] + ": " + dayAverageTemperature[i] + "\u00B0F");
40                    foundDay = true;
41                    break;
42                }
43            }
44
45            // If a valid day was found, exit the while loop
46            if (foundDay) {
47                break;
48            }
49
50            // Otherwise, prompt for input again if neither "week" nor a valid day was

```

Console X

<terminated> GetWeeklyTemperatures [Java Application] /Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java (Feb 16, 2025, 1:42:21 PM – 1:42:48 PM elapsed: 0:00)

```

Please enter a day of the week or the word 'week': dfs k e
Invalid input. Please enter a valid day (Monday through Sunday) or 'week': 1111
Invalid input. Please enter a valid day (Monday through Sunday) or 'week': Weekly
Invalid input. Please enter a valid day (Monday through Sunday) or 'week': weekly
Invalid input. Please enter a valid day (Monday through Sunday) or 'week': Week
Average temperature for the week: 35.0°F

```

```

1 package criticalthinkingassignment;
2
3 import java.util.Scanner;
4
5 public class GetWeeklyTemperatures {
6     public static void main(String[] args) {
7         Scanner scnr = new Scanner(System.in);
8
9         // Define arrays and variable
10        String[] daysOfWeek = { "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday" };
11        double[] dayAverageTemperature = { 35, 55, 33, 28, 31, 29, 34 };
12
13        double weekAverageTemperature;
14        double tempSumVal;
15        String userInput;
16
17        boolean foundDay = false;
18        int i;
19
20        System.out.print("Please enter a day of the week or the word 'week': ");
21        userInput = scnr.nextLine().trim();
22
23        while (true) {
24            // Check if the user wants the weekly average temperature
25            if (userInput.equalsIgnoreCase("week")) {
26                tempSumVal = 0;
27                for (i = 0; i < daysOfWeek.length; ++i) {
28                    tempSumVal += dayAverageTemperature[i];
29                }
30                weekAverageTemperature = tempSumVal / daysOfWeek.length;
31                System.out.println("Average temperature for the week: " + weekAverageTemperature + "\u00B0F");
32                break;
33            }
34
35            // Check if the input matches one of the days
36            for (i = 0; i < daysOfWeek.length; ++i) {
37                if (userInput.equalsIgnoreCase(daysOfWeek[i])) {
38                    System.out.println(
39                        "Average temperature on " + daysOfWeek[i] + ": " + dayAverageTemperature[i] + "\u00B0F");
40                    foundDay = true;
41                    break;
42                }
43            }
44
45            // If a valid day was found, exit the while loop
46            if (foundDay) {
47                break;
48            }
49
50            // Otherwise, prompt for input again if neither "week" nor a valid day was

```

Console X

```

<terminated> GetWeeklyTemperatures [Java Application] /Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java (Feb 16, 2025, 1:44:30 PM - 1:44:33 PM elapsed)
Please enter a day of the week or the word 'week': friday
Average temperature on Friday: 31.0°F

```

## Git repository

<https://github.com/danielvital3/CSC320-1>