

```

import java.util.ArrayList;
import java.util.Scanner;

public class PlantCareApp {

    // Inner Plant class
    static class Plant {
        String name;
        int waterInterval; // in days
        int fertilizeInterval; // in days
        int daysSinceWatered;
        int daysSinceFertilized;

        Plant(String name, int waterInterval, int fertilizeInterval) {
            this.name = name;
            this.waterInterval = waterInterval;
            this.fertilizeInterval = fertilizeInterval;
            this.daysSinceWatered = 0;
            this.daysSinceFertilized = 0;
        }

        void passDay() {
            daysSinceWatered++;
            daysSinceFertilized++;
        }

        void water() {
            daysSinceWatered = 0;
            System.out.println(name + " has been watered! 💧");
        }

        void fertilize() {
            daysSinceFertilized = 0;
            System.out.println(name + " has been fertilized! 🌱");
        }

        void showStatus() {
            System.out.println("\nPlant: " + name);
            System.out.println("Days since last watered: " + daysSinceWatered);
            System.out.println("Days since last fertilized: " + daysSinceFertilized);
            if (daysSinceWatered >= waterInterval) {
                System.out.println("⚠️ Reminder: Time to water " + name + "!");
            }
            if (daysSinceFertilized >= fertilizeInterval) {

```

```

        System.out.println("⚠ Reminder: Time to fertilize " + name + "!");
    }
}
}

```

// Program entry point

```

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    ArrayList<Plant> plants = new ArrayList<>();

    System.out.println("🌱 Welcome to the Plant Care Reminder App 🌱");
    System.out.println("Supporting SDG 15 – Life on Land");

```

```

while (true) {
    System.out.println("\nMenu:");
    System.out.println("1. Add new plant");
    System.out.println("2. Show all plants");
    System.out.println("3. Pass one day (advance days)");
    System.out.println("4. Water a plant");
    System.out.println("5. Fertilize a plant");
    System.out.println("6. Exit");
    System.out.print("Enter your choice: ");

```

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// Validate integer input
int choice;
if (sc.hasNextInt()) {
    choice = sc.nextInt();
    sc.nextLine(); // consume newline
} else {
    System.out.println("Please enter a number (1-6).");
    sc.nextLine(); // discard invalid token
    continue;
}

```

```

switch (choice) {
    case 1:
        System.out.print("Enter plant name: ");
        String name = sc.nextLine().trim();
        if (name.isEmpty()) {
            System.out.println("Name cannot be empty.");
            break;
        }
        System.out.print("Enter watering interval (days): ");
        int w = readPositiveInt(sc);

```

```
System.out.print("Enter fertilizing interval (days): ");
int f = readPositiveInt(sc);
plants.add(new Plant(name, w, f));
System.out.println(name + " added successfully!");
break;
```

case 2:

```
if (plants.isEmpty()) {
    System.out.println("No plants added yet.");
} else {
    for (Plant p : plants) {
        p.showStatus();
    }
}
break;
```

case 3:

```
if (plants.isEmpty()) {
    System.out.println("No plants to advance.");
} else {
    for (Plant p : plants) p.passDay();
    System.out.println("☀️ One day has passed for all plants.");
}
break;
```

case 4:

```
if (plants.isEmpty()) {
    System.out.println("No plants available.");
    break;
}
System.out.print("Enter plant name to water: ");
String waterName = sc.nextLine().trim();
if (!performActionOnPlant(plants, waterName, "water")) {
    System.out.println("Plant '" + waterName + "' not found.");
}
break;
```

case 5:

```
if (plants.isEmpty()) {
    System.out.println("No plants available.");
    break;
}
System.out.print("Enter plant name to fertilize: ");
String fertName = sc.nextLine().trim();
```

```

        if (!performActionOnPlant(plants, fertName, "fertilize")) {
            System.out.println("Plant " + fertName + " not found.");
        }
        break;

    case 6:
        System.out.println("Thank you for caring for nature! 🌳");
        sc.close();
        return;

    default:
        System.out.println("Invalid choice. Try again.");
    }
}

// Helper to read a positive integer from Scanner
private static int readPositiveInt(Scanner sc) {
    while (true) {
        if (sc.hasNextInt()) {
            int v = sc.nextInt();
            sc.nextLine();
            if (v > 0) return v;
            System.out.print("Please enter a positive number: ");
        } else {
            System.out.print("Please enter a valid number: ");
            sc.nextLine();
        }
    }
}

// Helper to find plant by name (case-insensitive) and perform action
private static boolean performActionOnPlant(ArrayList<Plant> plants, String targetName,
String action) {
    for (Plant p : plants) {
        if (p.name.equalsIgnoreCase(targetName)) {
            if (action.equals("water")) p.water();
            else if (action.equals("fertilize")) p.fertilize();
            return true;
        }
    }
    return false;
}

```

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## Overview

This is a console-based Java program that helps users take care of their plants — by reminding them when to water and fertilize.

It supports SDG 15 – Life on Land (protecting plants and promoting greenery).

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## How It Works

### 1. Plant class (inner class):

Stores plant details:

name, watering interval, fertilizing interval, and days since last care.

Has methods to:

passDay() → adds one day

water() → resets watering counter

fertilize() → resets fertilizing counter

showStatus() → shows reminders

### 2. Main program (PlantCareApp):

Uses a menu system with choices:

1. Add new plant

2. Show all plants

3. Pass one day

4. Water a plant

5. Fertilize a plant

6. Exit

3. `ArrayList<Plant>` stores all added plants.

4. Helper methods:

`readPositiveInt()` → ensures valid number input.

`performActionOnPlant()` → finds plant by name to water/fertilize it.

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 Purpose (SDG 15 – Life on Land)

Encourages people to care for plants and the environment through consistent reminders — promoting sustainable living.