# **Problem 3 - Botanical Garden Care System**



*Sara manages a large botanical garden that houses a variety of plants from different climates and regions, but she is struggling to keep track of the watering schedules and nutritional needs of all the plants. She needs a software solution to manage the care routine effectively.*

Your task is to develop a program that assists in organizing the daily maintenance of plants in the botanical garden. The program should maintain records of each plant, their required water, and the sections they are located in. You will receive commands until the "**EndDay**" message is received. The commands include:

* "**Plant: {plant name}-{water needed ml}-{section}**":
  + If the plant is new, add it along with its water needs and assigned section.
  + If the plant already exists, increase its water needs by the specified amount.
  + Track how many plants are in each section.
* "**Water: {plant name}-{water amount ml}**":
  + Deduct the specified water amount from the plant's needs.
  + If the plant does not exist in the records, ignore the command.
  + If a plant's water needs are satisfied (0 ml or less), remove it from the records and print:
    - "**{plant name} has been sufficiently watered.**"

After processing all commands, the program should:

1. List each plant still requiring water:

* "**Plants needing water:**"
* " **{plant name} -> {water needed ml}ml left**"

1. Display sections that still have plants needing water:

* "**Sections with thirsty plants:**"
* " **{section name}: {number of thirsty plants}**"

## Input / Constraints

* Input continues until "**EndDay**".
* Water is measured in milliliters, ranging from **10** to **10,000**.
* All inputs will be correctly formatted as described.
* Each plant can only be in one section.

## Output

* Announce when a plant has been sufficiently watered.
* List all plants that still need water along with their required amounts.
* Identify sections still housing thirsty plants.

## Examples

|  |  |
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| **Input** | **Output** |
| Plant: Orchid-300-TropicalZone  Plant: Fern-200-FernGully  Plant: Orchid-100-TropicalZone  Water: Daisy-50  Water: Orchid-400  EndDay | Orchid has been sufficiently watered.  Plants needing water:  Fern -> 200ml left  Sections with thirsty plants:  FernGully: 1 |
| Plant: Cactus-150-DesertArea  Plant: Bamboo-500-BambooGrove  Plant: Cactus-50-DesertArea  Water: Cactus-200  Water: Bamboo-500  EndDay | Cactus has been sufficiently watered.  Bamboo has been sufficiently watered.  Plants needing water:  Sections with thirsty plants: |
| Plant: Rose-300-FlowerBed  Plant: Tulip-150-FlowerBed  Water: Rose-100  Water: Tulip-150  EndDay | Tulip has been sufficiently watered.  Plants needing water:  Rose -> 200ml left  Sections with thirsty plants:  FlowerBed: 1 |

## JS Examples

The input will be provided as an array of strings.

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["Plant: Orchid-300-TropicalZone",  "Plant: Fern-200-FernGully",  "Plant: Orchid-100-TropicalZone",  "Water: Daisy-50",  "Water: Orchid-400",  "EndDay"]) | Orchid has been sufficiently watered.  Plants needing water:  Fern -> 200ml left  Sections with thirsty plants:  FernGully: 1 |
| (["Plant: Cactus-150-DesertArea",  "Plant: Bamboo-500-BambooGrove",  "Plant: Cactus-50-DesertArea",  "Water: Cactus-200",  "Water: Bamboo-500",  "EndDay"]) | Cactus has been sufficiently watered.  Bamboo has been sufficiently watered.  Plants needing water:  Sections with thirsty plants: |
| (["Plant: Rose-300-FlowerBed",  "Plant: Tulip-150-FlowerBed",  "Water: Rose-100",  "Water: Tulip-150",  "EndDay"]) | Tulip has been sufficiently watered.  Plants needing water:  Rose -> 200ml left  Sections with thirsty plants:  FlowerBed: 1 |