# Programming Fundamentals Final Exam 09.08.2020

## Problem 3. Plant Discovery

*You have now returned from your world tour. On your way you have discovered some new plants and you want to gather some information about them and create an exhibition to see which plant is highest rated.*

On the **first line** you will receive a number **n**. On the next **n lines**, you will be given some information about the plants that you have discovered in the format: **"{plant}<->{rarity}"**. **Store** that **information**, because you will need it later. If you receive a plant **more than once**, **update** its rarity. **Check properties.**

After that until you receive the **command** **"Exhibition"** you will be given some of these **commands**:

* **Rate: {plant} - {rating}** – **add** the given **rating** to the plant (**store all ratings**)
* **Update: {plant} - {new\_rarity}** – **update** the **rarity** of the plant with the **new one**
* **Reset: {plant}** – **remove all** the **ratings** of the given plant

***Note: If any of the command is invalid, print "error"***

After the command **"Exhibition"** print the information that you have about the plants in the following format:

**Plants for the exhibition:  
- {plant\_name}; Rarity: {rarity}; Rating: {average\_rating formatted to the 2nd digit}  
…**

The plants should be **sorted** by **rarity descending**, then by **average rating descending**

### Input / Constraints

* You will recive the input as **described above**
* **JavaScript**: you will receive a **list of strings**

### Output

* Print the **information** about all plants as **described above**

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 3  Arnoldii<->4  Woodii<->7  Welwitschia<->2  Rate: Woodii - 10  Rate: Welwitschia - 7  Rate: Arnoldii - 3  Rate: Woodii - 5  Update: Woodii - 5  Reset: Arnoldii  Exhibition | Plants for the exhibition:  - Woodii; Rarity: 5; Rating: 7.50  - Arnoldii; Rarity: 4; Rating: 0.00  - Welwitschia; Rarity: 2; Rating: 7.00 |
| 2  Candelabra<->10  Oahu<->10  Rate: Oahu - 7  Rate: Candelabra - 6  Exhibition | Plants for the exhibition:  - Oahu; Rarity: 10; Rating: 7.00  - Candelabra; Rarity: 10; Rating: 6.00 |

### JS Input / Output

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["3",  "Arnoldii<->4",  "Woodii<->7",  "Welwitschia<->2",  "Rate: Woodii - 10",  "Rate: Welwitschia - 7",  "Rate: Arnoldii - 3",  "Rate: Woodii - 5",  "Update: Woodii - 5",  "Reset: Arnoldii",  "Exhibition"]) | Plants for the exhibition:  - Woodii; Rarity: 5; Rating: 7.50  - Arnoldii; Rarity: 4; Rating: 0.00  - Welwitschia; Rarity: 2; Rating: 7.00 |
| (["2",  "Candelabra<->10"  "Oahu<->10",  "Rate: Oahu - 7",  "Rate: Candelabra - 6",  "Exhibition"]) | Plants for the exhibition:  - Oahu; Rarity: 10; Rating: 7.00  - Candelabra; Rarity: 10; Rating: 6.00 |