Problem 3 – Cookie Super Styles

The Cookie monster likes cookies, duh…

Yet the Big Bird (the Big B) holds all the cookies. Big B has a task for the Cookie monster (Cookiemon), in order to give him cookies.

The Cookie monster is given a text that looks much like CSS, but in his favor is called CookieCS (Cookie Super Styles). It follows the rules of standard CSS, but with different properties.

Sample CookieCS:

```
#the-big-b{
  color: yellow;
  size: big;
}
.muppet{
  skin: fluffy;
}
all{
  meant-for: nerdy-children;
}
```

CookieCS has the following rules:

- There are three types of selectors:
  - #id, .class and element
- Selectors can be nested. Valid nested selectors are:
  - #the-big-b .muppet
  - #the-big-b > .muppet
  - #the-big-b ~ .muppet
  - #the-big-b + #cookiemon
- Selectors have properties:
  - Properties are surrounded by { and }
  - Each property has a name and a value, that are separated by ‘:’
  - Each property name-value pair ends with ’;’

Since the MNet (the Muppet Net) has slow connection, the Cookiemon has to make the CookieCS smaller by:

- Removing all unnecessary whitespace
  - The only remaining whitespace must be between nested selectors of type “#the-big-b all”
  - All other whitespace must be removed
  - Whitespace means: space, tabs, new lines, etc…
- Removing the ‘;’ of the last property of all selectors
- Merge equal selectors
  - If the same selector is met more than once, merge the properties of all these selectors in one place
  - The order of appearance of properties must remain the same
  - Only the first occurrence of the selector must remain
- Change property values
  - If the same selector is met more than once, merge its properties

- If the same property is set in more than one occurrence of the selector, only the last one remains

Input

You are given an array of selectors and properties. Each element of the array can contain only one of the following:

- Selectors and opening bracket: "#the-big b {" or "#the-big-b + #the-cookiemon {"
- Property name and value, followed by ";": "color:yellow;"
- Closing bracket: "}"
- Whitespaces may occur everywhere, where possible

Output

Return or console.log the resulting CookieCS

Sample solution code (in JavaScript)

```javascript
function solve(args) {
    var result =…;
    // Your solution here
    console.log(result);
}
```

Constraints

- **The lines of CookieCS will always be less than 1000**
- **Whitespaces count may vary, they can be between 0 and 100 at each possible position**
- **Some of the test cases are designed to test only specific cases, so partial solutions may also earn points**
- Allowed working time for your program: **0.20 seconds**. Allowed memory: **32 MB**.

Examples

Input

#the-big-b{
 color: yellow;
 size: big;
}
.muppet{
 powers: all;
 skin: fluffy;
}
   .water-spirit   {
 powers: water;
     alignment   : not-good;
            }
all{
 meant-for: nerdy-children;
}

```
.muppet    {
        powers: everything;
}
all       .muppet {
        alignment       :       good             ;
}
  .muppet+       .water-spirit{
  power: everything-a-muppet-can-do-and-water;
}
```

Output

#the-big-b{color:yellow;size:big}.muppet{skin:fluffy;powers:everything}.water-spirit{powers:water;alignment:not-good}all{meant-for:nerdy-children}all.muppet{alignment:good}.muppet+.water-spirit{power:everything-a-muppet-can-do-and-water}