



HDNL Toy

Java May'19 DSA Linear 1 - 1 day 19:29:56

Steve found a new toy to play with. It's called HDNL (High Definition Native Language). He doesn't know what it is used for, he just finds it interesting. HDNL works by defining homeomorphic endofunctors mapping submanifolds of a Hilbert space. Sadly, when Steve is looking at HDNL, he isn't always able to imagine how all it would look in the end. Each line of HDNL is consisted of **a letter and a number** and opens a tag (like HTML tag). The letter is important, though Steve can't remember why. The number defines the **level of nesting**. Steve wants to see how he can nest all the tags such that the **level of nesting** of inner tags is **bigger** than that of outer tags. Your task is to write a program for Steve which shows nicely indented and closed HDNL tags.

Input

- On the first line of input, a number **N** is read - the number of HDNL lines to follow
- Each of the next **N** lines will be a Latin letter glued to positive number

Output

- There should be `N * 2` lines
- Each output line should contain either an opening or a closing tag
- Use `1` space for indentation

Constraints

- `1 <= N <= 100 000`
- `1 <= level of nesting <= 1000`

Sample tests

Input

[Submit solution](#)[My submissions](#)
[All submissions](#)
[Best submissions](#)[Read editorial](#)

✓ **Points:** 100 (partial)
⌚ **Time limit:** 0.3s
Java: 1.0s
📄 **Memory limit:** 32M
Java: 32M
✍ **Author:** [maya](#)

🔖 **Tags**
Linear Data
Structures
⬆ **Difficulty**
Intermediate

▼ **Allowed languages**
java

[Copy](#)



```
r5  
d2  
a0
```

Java May'19 DSA Linear 1 - 1 day 19:29:56

Output

```
<h1>  
  <r5>  
  </r5>  
  <d2>  
  </d2>  
</h1>  
<a0>  
</a0>
```

Copy

Input

Copy

[PROBLEMS](#)[SUBMISSIONS](#)[USERS](#)[CONTESTS](#)[ABOUT](#)HELLO, **YAVORYANKOV83**.

b2

c3

d3

e2

f3

g2

h1

i2

Java May'19 DSA Linear 1 - 1 day 19:29:56

Output

[Copy](#)



Java May'19 DSA Linear 1 - 1 day 19:29:56

<c3>
</c3>
<d3>
</d3>
</b2>
<e2>
<f3>
</f3>
</e2>
<g2>
</g2>
</a1>
<h1>
<i2>
</i2>
</h1>

? Clarifications

No clarifications have been made at this time.