

# Detect HTML Tags



In this challenge, we're using regular expressions to detect the various *tags* used in an HTML document.

- Tags come in pairs. Some tag name, **t**, will have an opening tag, **<t>**, followed by some intermediate text, followed by a closing tag, **</t>**. The forward slash in a closing tag will always come *before* the tag name.
- The exception to this is *self-closing* tags, which consist of a *single tag* (not a pair) with a forward slash *after* the tag name: **<p/>**

Here are a few examples of tags:

- The **p** tag is for paragraphs: **<p>This is a paragraph</p>**
- There may be **1** or more spaces before or after a tag name:  
**< p >This is also a paragraph</p>**
- A *void* or *empty tag* involves an opening and closing tag with no intermediate characters: **<p></p>**

Some tags can also have *attributes*, such as the **a** tag, which is used to add a hyperlink to another document: **<a href="http://www.google.com">Google</a>**

In the above case, **a** is the tag name and **href** is an attribute having the value **http://www.google.com**.

## Task

Given **N** lines of HTML, find the tag names (ignore any attributes) and print them as a single line of lexicographically ordered semicolon-separated values (e.g.: **tag1;tag2;tag3**).

## Input Format

The first line contains an integer, **N**, the number of HTML fragments.  
Each of the **N** subsequent lines contains a fragment of an HTML document.

## Constraints

- $1 \leq N \leq 100$
- Each fragment contains **< 10000** ASCII characters.
- The fragments are chosen from [Wikipedia](#), so analyzing and observing their markup structure may help.
- Leading and trailing spaces/indentation have been trimmed from the HTML fragments.

## Output Format

Print a single line containing *all* of the unique tag names found in the input. Your output tags should be semicolon-separated and ordered lexicographically (i.e.: alphabetically). Do not print the same tag name more than once.

## Sample Input

```
2
<p><a href="http://www.quackit.com/html/tutorial/html_links.cfm">Example Link</a></p>
<div class="more-info"><a href="http://www.quackit.com/html/examples/html_links_examples.cfm">More Link Examples...</a>
</div>
```

## Sample Output

```
a;div;p
```

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## Explanation

The first line contains **2** tag names: **{p, a}**.

The second line contains **2** tag names: **{div, a}**.

Our set of unique tag names is **{p, a, div}**.

When we order these alphabetically and print them as semicolon-separated values, we get **"a;div;p"**.