Detect the Domain Name

You will be provided with a chunk of HTML markup. Your task is to identify the unique domain names from the links or Urls which are present in the markup fragment.

For example, if the link http://www.hackerrank.com/contest is present in the markup, you should detect the domain: hackerrank.com. In case there are second level or higher level domains present in the markup, all of them need to be treated as unique. For instance if the links http://www.xyz.com/news, https://abc.xyz.com/jobs, http://abcd.xyz.com/jobs2 are present in the markup then [xyz.com, abc.xyz.com, abcd.xyz.com] should all be identified as unique domains present in the markup. Prefixes like "www." and "ww2.", if present, should be scrubbed out from the domain name.

Input Format

An Integer N. This is equal to the number of lines in the HTML Fragment which follows. A chunk of HTML Markup with embedded links, the length of which is N lines.

Output Format

One line, containing the list of detected domains, separated by semi-colons, in lexicographical order. Do not leave any leading or trailing spaces either at the ends of the line, or before and after the individual domain names.

Sample Input

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 10
<div class="reflist" style="list-style-type: decimal;">
<ol class="references">
<li id="cite_note-1"><span class="mw-cite-backlink"><b>^ ["Train (noun)"](http://www.askoxford.com/concise_oed/train?view=uk).
<i>(definition – Compact OED)</i>. Oxford University Press<span class="reference-accessdate">. Retrieved 2008-03-18</span>.
</span><span title="ctx_ver=Z39.88-
2004&rfr_id=info%3Asid%2Fen.wikipedia.org%3ATrain&rft.atitle=Train+%28noun%29&rft.genre=article&rft_id=http%3A%2F%2Fww
w.askoxford.com%2Fconcise_oed%2Ftrain%3Fview%3Duk&rft.jtitle=%28definition+%E2%80%93+Compact+OED%29&rft.pub=Oxfo
rd+University+Press&rft_val_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Ajournal" class="Z3988"><span
style="display:none;"> </span></span></span></li>
<li id="cite_note-2"><span class="mw-cite-backlink"><b>^</b></span> <span class="reference-text"><span class="citation
book">Atchison, Topeka and Santa Fe Railway (1948). <i>Rules: Operating Department</i>. p. 7.</span><span
title="ctx_ver=Z39.88-
2004&rfr_id=info%3Asid%2Fen.wikipedia.org%3ATrain&rft.au=Atchison%2C+Topeka+and+Santa+Fe+Railway&rft.aulast=Atchison
%2C+Topeka+and+Santa+Fe+Railway&rft.btitle=Rules%3A+Operating+Department&rft.date=1948&rft.genre=book&rft.pages=7
&rft_val_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Abook" class="Z3988"><span style="display:none;"> </span></span></span>
</li>
<li id="cite_note-3"><span class="mw-cite-backlink"><b>^ [Hydrogen trains]
(http://www.hydrogencarsnow.com/blog2/index.php/hydrogen-vehicles/i-hear-the-hydrogen-train-a-comin-its-rolling-round-the-bend/)
</span></li>
<li id="cite_note-4"><span class="mw-cite-backlink"><b>^ [Vehicle Projects Inc. Fuel cell locomotive]
(http://www.bnsf.com/media/news/articles/2008/01/2008-01-09a.html)</span></li>
<li id="cite_note-5"><span class="mw-cite-backlink"><b>^</b></span> <span class="reference-text"><span class="citation
book">Central Japan Railway (2006). <i>Central Japan Railway Data Book 2006</i>. p. 16.</span><span title="ctx_ver=Z39.88-
2004&rfr_id=info%3Asid%2Fen.wikipedia.org%3ATrain&rft.au=Central+Japan+Railway&rft.aulast=Central+Japan+Railway&rft.btitle=
Central+Japan+Railway+Data+Book+2006&rft.date=2006&rft.genre=book&rft.pages=16&rft_val_fmt=info%3Aofi%2Ffmt%3Akev%
3Amtx%3Abook" class="Z3988"><span style="display:none;"> </span></span></span></li>
<li id="cite_note-6"><span class="mw-cite-backlink"><b>^ ["Overview Of the existing Mumbai Suburban Railway"]
(http://web.archive.org/web/20080620033027/http://www.mrvc.indianrail.gov.in/overview.htm). _Official webpage of Mumbai Railway
Vikas Corporation_. Archived from [the original](http://www.mrvc.indianrail.gov.in/overview.htm) on 2008-06-20<span
class="reference-accessdate">. Retrieved 2008-12-11</span>.</span><span title="ctx_ver=Z39.88-
2004&rfr_id=info%3Asid%2Fen.wikipedia.org%3ATrain&rft.atitle=Overview+Of+the+existing+Mumbai+Suburban+Railway&rft.genre
=article&rft_id=http%3A%2F%2Fwww.mrvc.indianrail.gov.in%2Foverview.htm&rft.jtitle=Official+webpage+of+Mumbai+Railway+Vikas
+Corporation&rft_val_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Ajournal" class="Z3988"><span style="display:none;"> </span>
</span></span></li>
</ol>
</div>
```

Sample Output

askoxford.com;bnsf.com;hydrogencarsnow.com;mrvc.indianrail.gov.in;web.archive.org