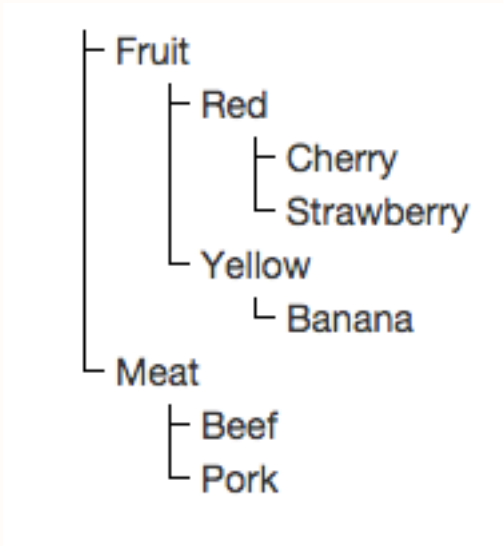


Draw a Tree Structure With Only CSS

by *kqr*, published
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Sometimes you have data in a tree structure. Common candidates are hierarchies in a company, module architecture in a system or files on disk. It would be really nice to be able to generate an HTML page with this data neatly rendered so as to actually look like a tree structure. In other words, we'll be shooting for something like this*:



That's actually drawn with only CSS, using the pseudo-elements `::before` and `::after`. We start with a simple HTML list.

```
<div class="clt">
  <ul>
    <li>
      Fruit
      <ul>
        <li>
          Red
          <ul>
            <li>Cherry</li>
            <li>Strawberry</li>
          </ul>
        </li>
        <li>
          Yellow
          <ul>
            <li>Banana</li>
          </ul>
        </li>
      </ul>
    </li>
    <li>
      Meat
      <ul>
        <li>Beef</li>
        <li>Pork</li>
      </ul>
    </li>
  </ul>
</div>
```

```
</ul>
</li>
</ul>
</div>
```

With this out of the way†, let's get into the CSS. First we need to set up the list and container so it doesn't interfere with our tree drawing.

```
.clt, .clt ul, .clt li {
    position: relative;
}

.clt ul {
    list-style: none;
    padding-left: 32px;
}
```

Then we take our pseudo-elements, make sure they are empty and move them to the left of the list elements.

```
.clt li::before, .clt li::after {
    content: "";
    position: absolute;
    left: -12px;
}
```

The `::before` pseudo-element is used to draw the horizontal lines.

```
.clt li::before {
    border-top: 1px solid #000;
    top: 9px;
    width: 8px;
    height: 0;
}
```

...and the vertical lines use the `::after` pseudo-element.

```
.clt li::after {
    border-left: 1px solid #000;
    height: 100%;
    width: 0px;
    top: 2px;
}
```

The icing on the cake is that the last item on every level has just a very short line leading to it, and nothing further. This makes it look very nice.

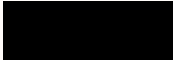
```
.clt ul > li:last-child::after {
    height: 8px;
}
```

And that's it! I think it's fascinating something like that is possible.

* If the tree I used as an example in this post looks familiar, it's because it's been used by someone else to illustrate [efficient storage of trees in relational databases](#). I stole it from there.

† If this doesn't highlight one of the problems with the HTML format, I don't know what does.

Feel free to [show your support by buying me a coffee](#), *iff* you want to.
Or [send me an email](#). Emails show nearly as much support as coffee.

Shoutout to my amazing wife 
without whose support I would never
make it past the first sentence. ♥