CSCE 5320 Scientific Data Visualization

Visualization of Spatial Data, Networks, and Trees

ICE-8: Tutorial

- **Making Maps**

  World Atlas TOPOJSON: https://www.npmjs.com/package/world-atlas/v/2.0.1

  JSON data with geo info for countries:

  https://cdn.jsdelivr.net/npm/world-atlas@2/countries-110m.json
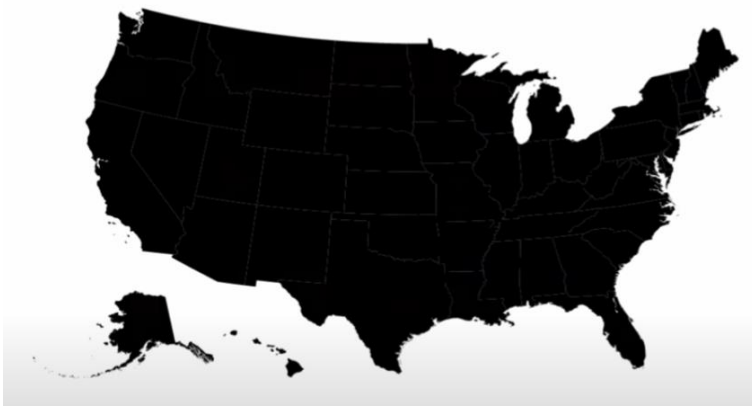
  d3-geo-projection: https://github.com/d3/d3-geo-projection

  A world map example:

  United States Map Example:

- **Visualizing tree and Networks:**

  The data structure is d3.stratify, which transforms a tree from link representation to hierarchy

  Resources: https://observablehq.com/@d3/d3-stratify

  Example code of d3.tree:

  https://bl.ocks.org/d3noob/8375092

  https://www.developer.com/design/creating-a-tree-diagram-with-d3-js/
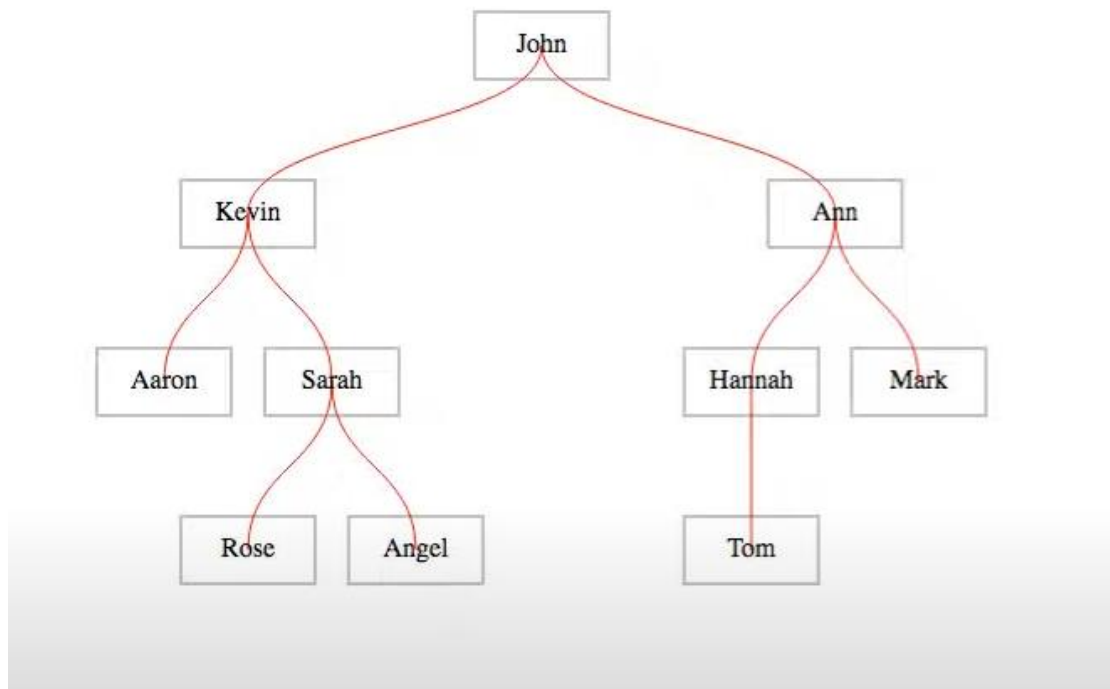
  Please create your own family tree data:

  For example:

```
var data = [{"child":"John", "parent":""},
            {"child":"Aaron", "parent":"Kevin"},
            {"child":"Kevin", "parent":"John"},
            {"child":"Hannah", "parent":"Ann"},
            {"child":"Rose", "parent":"Sarah"},
            {"child":"Ann", "parent":"John"},
            {"child":"Sarah", "parent":"Kevin"},
            {"child":"Mark", "parent":"Ann"},
            {"child":"Angel", "parent":"Sarah"}
        ];
```

You can also use a csv or Jason data.

Example code of basic network chart in d3:

https://d3-graph-gallery.com/graph/network_basic.html

Example of a social network: