



Others

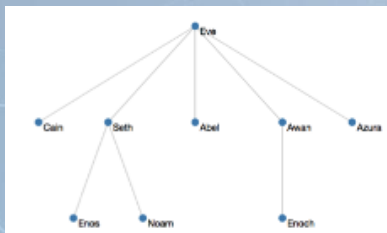
Data Visualization

Hierarchical Layout

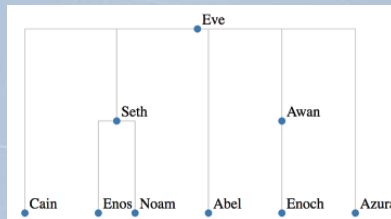
- d3 needs “d3.hierarchy” object to visualize hierarchical layout (such as tree)
- You need a data which looks like the screenshot at the right-hand side
- d3.hierarchy() function will construct a new nested hierarchical structure to store data (keyword: children)
 - ```
var root = d3.hierarchy(data,
 function(d){
 return d.children;
 })
```

```
var data = {
 "name": "Eve",
 "children": [
 {
 "name": "Cain"
 },
 {
 "name": "Seth",
 "children": [
 {
 "name": "Enos"
 },
 {
 "name": "Noam"
 }
]
 },
 {
 "name": "Abel"
 },
 {
 "name": "Awan",
 "children": [
 {
 "name": "Enoch"
 }
]
 },
 {
 "name": "Azura"
 }
]
};
```

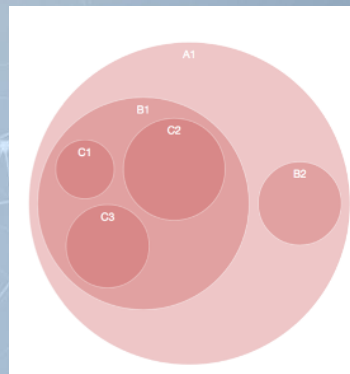
# Hierarchical Layout



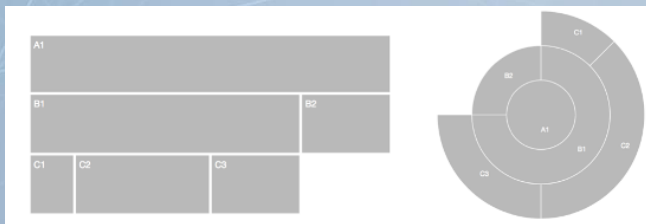
Tree: `d3.tree()`



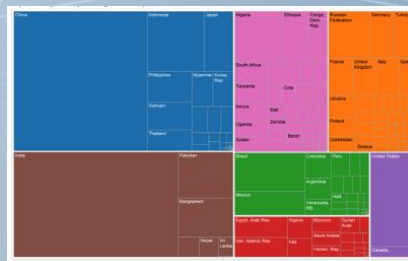
Cluster: `d3.cluster()`



`d3.pack()`



Partition: `d3.partition()`



Treemap: `d3.treemap()`

# Load Multiple Data Files

- If you need to load multiple files

```
var promises = [
 d3.json("taiwan.json"),
 d3.csv("players.csv")
];

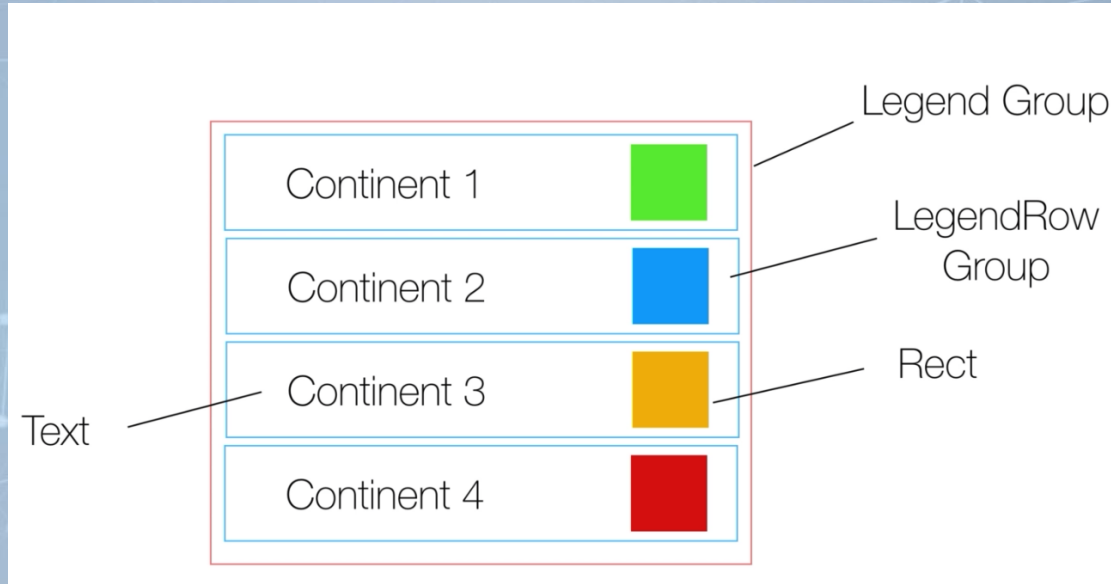
Promise.all(promises).then(function(allData){
 var data0 = allData[0];
 var data1 = allData[1];
 console.log(data0);
 console.log(data1);
}).catch(function(error){
 console.log(error);
});
```

# Migrate Code to > v5

- You may find many code examples developed by d3 v3 or v4
- What you need to do to migrate v4 code v5 or v6
  - Data loading
    - `d3.csv(file, func)` is replaced by `d3.csv(file).then(func)`
  - Color scheme
    - `d3.schemeCategory20` is replaced by `d3-scale-chromatic`
- What you need to do to migrate v3 to v4
  - <https://kristinhenry.medium.com/migrating-to-version-4-of-d3-part1-6a5e83ce8e31>
  - <https://kristinhenry.medium.com/migrating-to-version-4-of-d3-part-2-modules-packages-and-plugins-b70427552fe4>



# Concept to Add a Legend



# Automatically Update Views

- `d3.interval(callback, delay)`
  - Call function after every given time interval
  - Document: <https://www.geeksforgeeks.org/d3-js-interval-function/>
- Example:
  - <https://bl.ocks.org/pvernier/b00af256b014e2824bf48b481754ff78>