

Lab 5 (2/17)

Submit your team number

Question *Submitted Feb 17th 2023 at 8:50:53 pm*

Please enter your team number.

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1. Streamgraph

Stacked bar plots are great when you have few categories. What happens when there are multiple categories/primary keys? That's where streamgraphs can help.

"A Stream graph is a type of stacked area chart. It displays the evolution of a numeric value (Y axis) following another numeric value (X axis). This evolution is represented for several groups, all with a distinct color."

Now let's make one which shows evolution of baby names in US

Using [babynames.csv](#) create a basic stream graph which shows the evolution of baby names across the years using [lab5.html](#)

Some helpful links (please read these and feel free to ask us questions after you've read them)

1) [Streamgraph example](#)

Note: you might notice the version in this example is d3 v4 and v6. Your version is v7. Please adapt your functions to v7.

2) [d3.area\(\)](#)

3) [d3.scaleTime\(\)](#)

4) [d3.scaleOrdinal](#)

5) [Animations of different offsets in d3 streamgraphs](#)

Question Submitted Feb 17th 2023 at 9:08:00 pm

Copy your code to which define and create the streamgraph plot

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">
```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<script src="https://d3js.org/d3.v7.min.js"></script>

</head>

<body>

  <div class="stream"> </div>

  <script>

    // set the dimensions and margins of the graph

    let width = 500

    let height = 420

    let margin = { top: 20, right: 30, bottom: 30, left: 40 }

    // append the svg object to the div "stream" of the page

    var svg = d3.select(".stream").append("svg")

    .attr("width", width + margin.left + margin.right)

    .attr("height", height + margin.top + margin.bottom)

    .append("g")

    .attr("transform", "translate(" + margin.left + "," + margin.top + ")");

    // Load the Data

    babynames = d3.csv("babynames.csv")

    babynames.then(function (data){

    var keys = Object.keys(data[0]).slice(1)

    //define scaling

    var xScale = d3.scaleLinear()

    .domain(d3.extent(data, function (d) { return +d.year })))

    .range([0, width])

    var yScale = d3.scaleLinear()
```

```
.domain([0, d3.max(data, function (d) { return +d3.sum(keys, k => +d[k]) }]))

.range([height, 0])

var colors = d3.scaleOrdinal()

.domain(keys)

.range(d3.schemeCategory10)

//Stack the data

var stacked = d3.stack()

.keys(keys)

.offset(d3.stackOffsetWiggle)

(data)

// Generate streamgraph

var area = d3.area()

.x(function (d) { return xScale(d.data.year) })

.y0(function (d) { return yScale(d[0]) })

.y1(function (d) { return yScale(d[1]) })

svg.selectAll("path")

.data(stacked)

.enter().append("path")

.attr("d", area)

.style("fill", function (d) { return colors(d.key) })

svg.append("g")

.attr("transform", "translate(0," + height + ")")

.call(d3.axisBottom(xScale))

svg.append("g")

.call(d3.axisLeft(yScale))

})
```

</script>

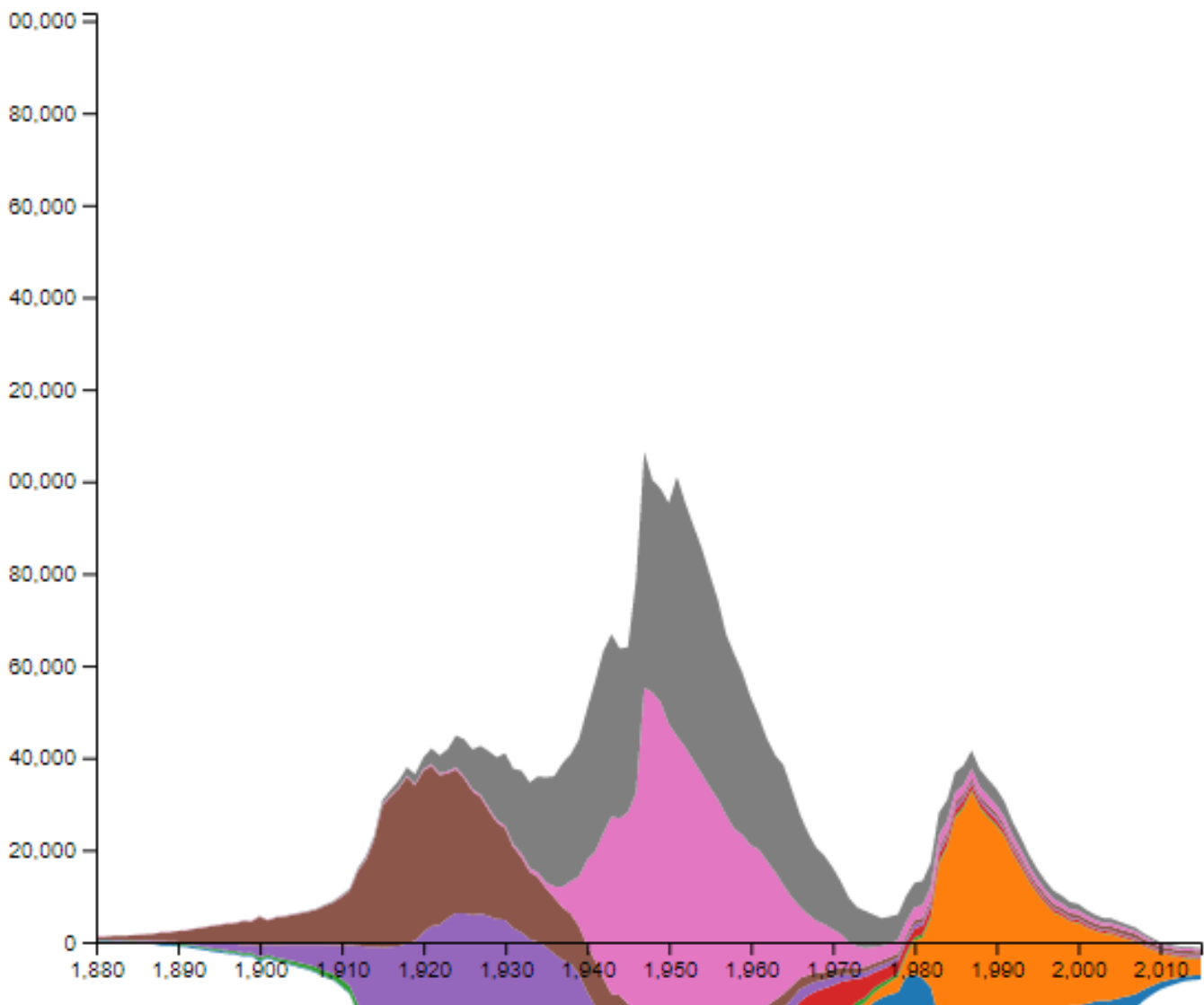
</body>

</html>

Upload Your Files

Question 1 Submitted Feb 17th 2023 at 9:09:34 pm

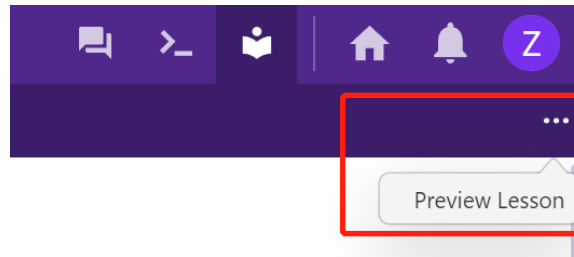
Upload the screenshot of your resulting webpage. You will need to click the "clip" button to upload a file into the Answer box.



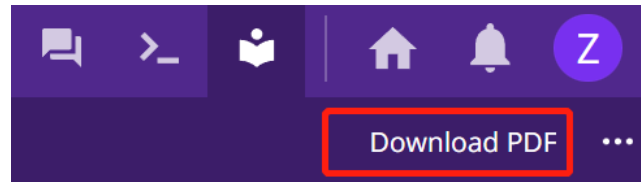
Question 2 Submitted Feb 17th 2023 at 9:09:42 pm

You need to download the PDF of lecture exercise 3 and upload it with other files to the Gradescope. Follow the instructions on how to download PDF file:

1. Click on the ellipsis button and the Preview Lesson.



2. After that, click on the Download PDF button.



☒ PDF downloaded!

☐ Haven't done yet!

Question 3 *Submitted Feb 17th 2023 at 9:09:41 pm*

Upload the following files to Gradescope. You need to make **a group submission, adding all present members in your team**, so that the present members get the participation credit.

Files to upload:

- lab5.html
- PDF you downloaded as Q2

☒ Our team uploaded the the files on gradescope!

☐ Oops, our team did not upload the files on gradescope!

Feedback

Question *Submitted Feb 17th 2023 at 9:10:02 pm*

Was the activity today clear? If not, please share how the course can improve it. Your comments will help us design future lab content (and also future students).

A little unclear on the expectations on the lab.