Lecture Exercise 6 (5/9)

Submit your team number

Question *Submitted May 9th 2023 at 4:32:01 pm*

Please enter your team number.

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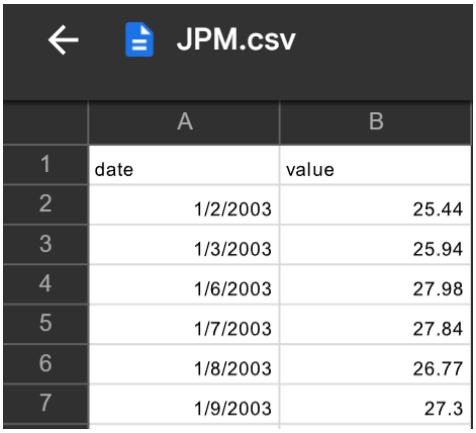
1. Linechart -- Parsing Date

In this exercise, we will use the JPMorgan Chase & Co. stock data to draw a linechart.

First, download exercise6.html and JPM.csv (make sure they are in the **same folder**).

Here's the preview of JPM.csv.



	A	B
1	date	value
2	1/2/2003	25.44
3	1/3/2003	25.94
4	1/6/2003	27.98
5	1/7/2003	27.84
6	1/8/2003	26.77
7	1/9/2003	27.3

Question *Submitted May 9th 2023 at 5:00:49 pm*

First of all, we need to define our `rowConverter` as in Lab 3 to parse our data. Noticing that we now have a "`date`" value. Using d3.timeParse() to parse it.

> You do not need to use npm install here to call d3.timeParse().

Copy/paste your `rowConverter` below.

```
const rowConverter = function(d){
            // Define your rowConverter here
            let parser = d3.timeParse("%m/%d/%Y");
            return {
                date: parser(d.date),
                value: +d.value
            }
        };
```

2. Linechart -- Adding Axes and Dynamic Scales

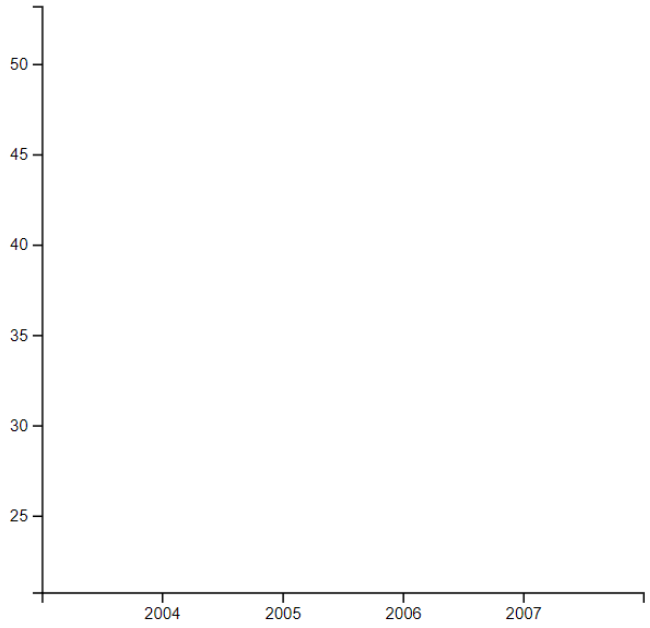
Now, we would like to define the axes and scales of our line chart.

As for X-axis, we will use d3.scaleTime() to add the dynamic scale.

As for the Y-axis, we need to use d3.scaleLinear(). In addition, we need to define the axes and append it to the svg element.

> We introduced `d3.min() and d3.max()` in the previous lecture contents. In this lecture exercise, we will use d3.extent() to define the scales' domain. It returns [*min*, *max*] in a single pass over the input, which is particularly convenient if you wish to set a scale's domain.

After that, your chart will look like this:



Question *Submitted May 9th 2023 at 5:25:31 pm*

Copy/paste your scales and axes below.

> Recap: You can refer to Lab 4 for adding axes.

```
// Add X axis and scale
const xScale = d3.scaleTime()
    .domain(d3.extent(data, d => d.date))
    .range([0, width])
```

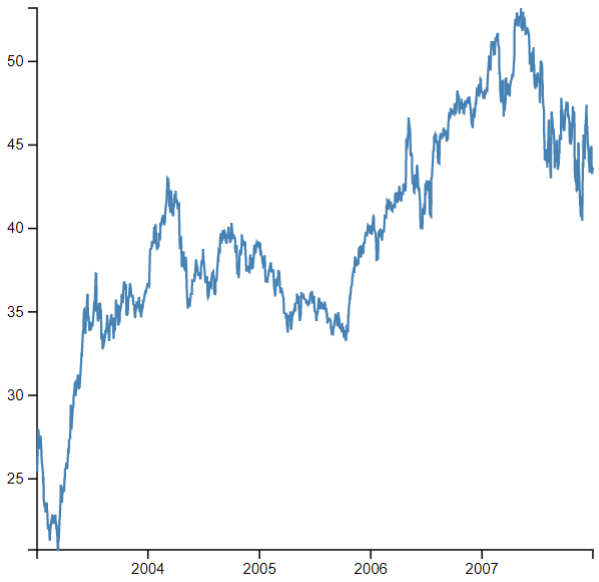
```
            d3.select("svg").append("g").call(d3.axisBottom(xScale))
                .attr("class", "xAxis")
                .attr("transform", `translate(${margin.left}, ${height})`)

            // Add Y axis and scale
            const yScale = d3.scaleLinear()
                .domain(d3.extent(data, d => d.value))
                .range([height, 0])
            d3.select("svg").append("g").call(d3.axisLeft(yScale))
                .attr("class", "yAxis")
                .attr("transform", `translate(${margin.left}, 0)`)
```

3. Linechart -- Draw the Linechart

Now we would like to draw the linechart. Instead of `<rect>`, we will add `<path>` to the svg canvas.

You can refer to the tutorial on the basic linechart for more details.

Your linechart should look similar to the graph below.



Question *Submitted May 9th 2023 at 5:34:12 pm*

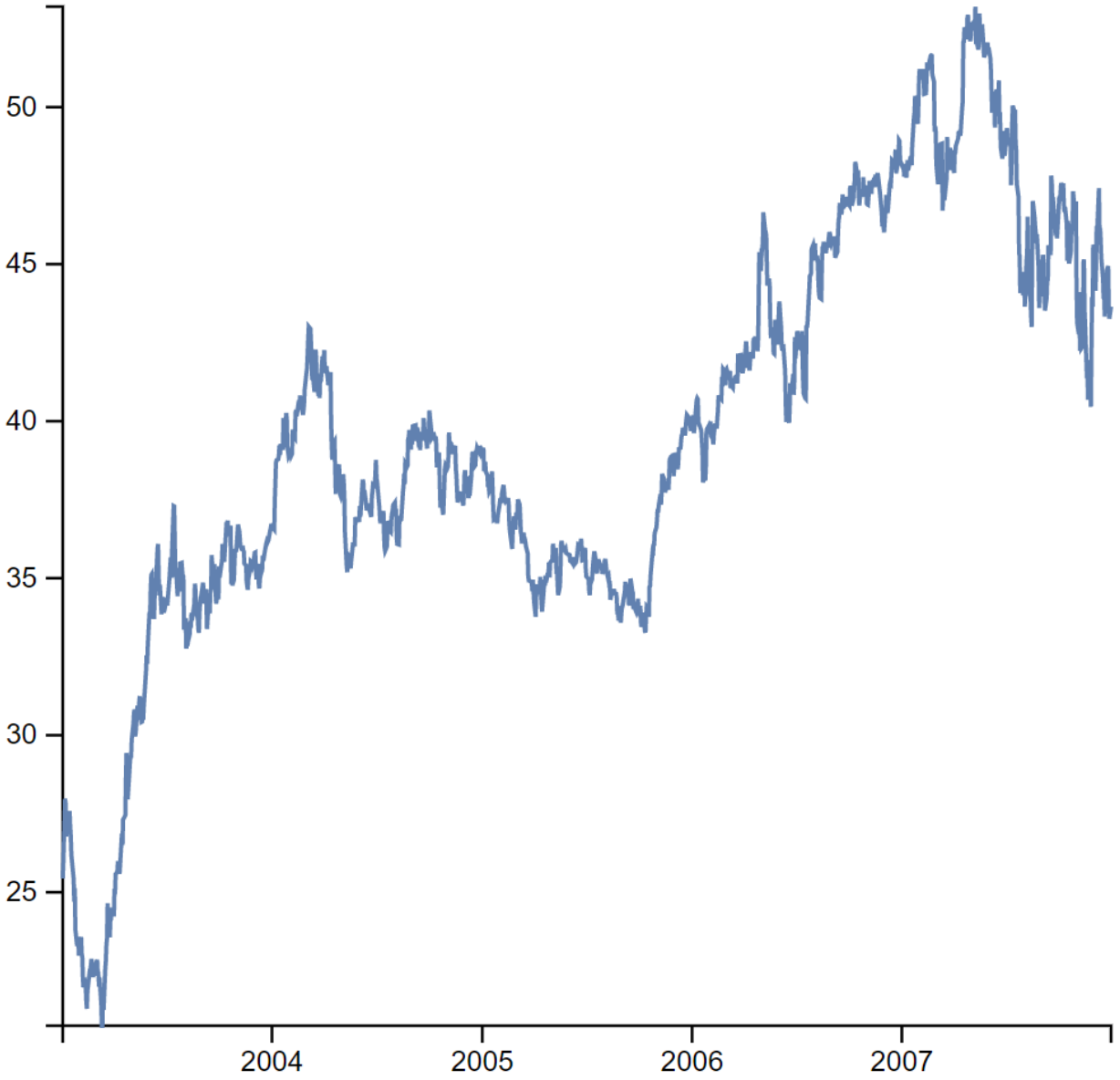
Copy/paste your linechart code below.

```
svg.append("path")
    .datum(data)
    .attr("fill", "none")
    .attr("stroke", "steelblue")
    .attr("stroke-width", 1.5)
    .attr("d", d3.line()
        .x(d => xScale(d.date))
        .y(d => yScale(d.value))
    )
    .attr("transform", `translate(${margin.left}, 0)`)
```

Upload Your Files

Question 1 *Submitted May 9th 2023 at 5:35:08 pm*

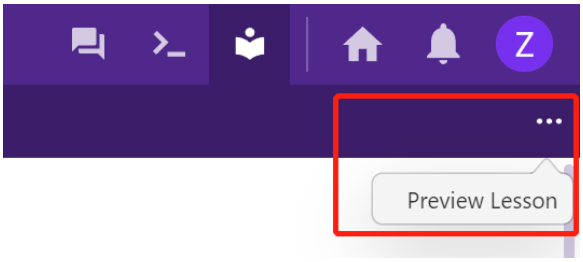
Upload the screenshot of your resulting webpage. You will need to click the "clip" button to upload a file into the Answer box.



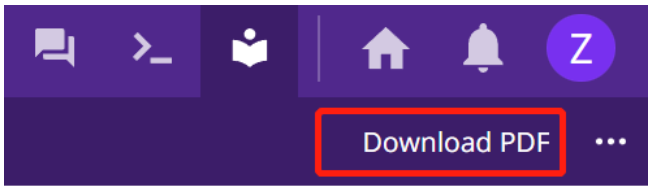
Question 2

You need to download the PDF of lecture exercise 6 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

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:

- exercise6.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

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).

No response