

Exercise Sheet 1

Information and Software Visualization (SoSe 2019)

Deadline: Wednesday, 17.04.2018, 14:00

Everyone is required to submit an individual solution. Group discussions are possible and encouraged, but each individual solution must be clearly distinguishable from others. The submission takes place via Moodle—upload all necessary files as a single zip file. Make sure your code runs in Google Chrome and includes all the dependencies.

This exercise sheet includes 1 task with a total of 10 Points (10 Point $\hat{=}$ 100%).

Task 1 [Points: 10]

The goal of this exercise is to create and manipulate Scalable Vector Graphics (SVG) through the use of pure JavaScript. You are not allowed to use any library for the completion of this task. Draw a simple bar chart based on the data provided in the attached HTML template `es01_template.html`—it serves as the starting point of this task. The data is stored as a 2D array in the variable `data`. You are required to complete the following subtasks:

- (a) (2 Points) Implement the function `drawBar(x, y, h, w)`. It should create and return a single bar (SVG rectangle) based on the arguments. `x` and `y` specify the position of the top-left corner of the bar. Similarly, `h` and `w` are the height and width of the bar respectively.
- (b) (6 Points) Implement the function `drawBarChart(container, data)` to draw a bar for every data point. Make sure you use `drawBar(x, y, h, w)` here for drawing individual bars. Add these bars to the SVG container. The variable `container` is the identifier of this container; it has been created for you.
- (c) (2 Points) Finally, implement the function `drawAxis()` to draw and return x- and y-axis. Append them to your bar chart.