JavaScript

MSc Computer Science

Programme Tutorial

March 30, 2022

Odd behaviours of JavaScript

https://www.youtube.com/watch?v=et8xNAc2ic8

Nested Objects

As part of the Software Tools exercises, you are required to sort and filter information stored in JavaScript objects. These objects can have deep nesting, which requires you to understand what is in an object and how to treat it's various parts. Take the code below as an example JS object to work on today.

Example

```
let data = {
    people: [
        {
            name: "tim",
            attributes: {
                age: 20,
                height: 180
            }
        },
        {
            name: "sarah",
            attributes: {
                age: 30,
                height: 150
            }
        },
        {
            name: "jen",
            attributes: {
                age: 18,
                height: 175
            }
        },
        {
            name: "fred",
            attributes: {
                age: 42,
                height: 200
            }
        }
    ]
};
```

Tasks

Note: You can run JavaScript files from the terminal with the help of node.js, a JavaScript runtime. here are basic instructions for using node.

1. Sort the people based on their age in alphabetical order. First do this using several lines of code, and then condense your answer into one line of code.
2. Filter the people so that only people younger than 30 remain in the object.
3. Apply this understanding in the JavaScript exercises.

Reading

- Sorting an array of Strings the long way
- The short way
- Localcompare()
- Array.filter() (same link as in lecture materials)

Debugging

- console.log() will print to the terminal
- The typeof() function will often provide misleading results!
- Array.sort() works differently in different circumstances, and so you may be confused when you first try to use it. I have not been able to find documentation on how this works underneath.