

3/26/2021

CS303 Object Oriented and Functional Programming in JavaScript

W1D6 Destructuring, Date, JSON

Part 1: Destructure, Date, JSON

Complete the following tasks from The JavaScript Language book. Try to answer them before looking at the solutions. For the ones asking you to write code do that in VSCode and use the esLint coding conventions we gave you. These are all from the Chapter: Data Types and cover the sections noted below.

Use the Mocha test file, `destructureTests.js`, with your VSCode implementations.

Section: Destructuring assignment

- Destructuring assignment
- The maximal salary
 - See points in lecture slides about `Object.entries`

Section: Dates

- Create a date
- Show a weekday
- European weekday
- Which day of month was many days ago?
- Last day of the month?
- How many seconds has passed today?
- Format the relative date

Section: JSON

Turn the object into JSON and back

Part 2: Array method practice: (These are not due until Monday evening. They provide more practice prior to the exam.) Write functions that use `map`, `filter`, `find`, `include`, and `reduce` functions to carry out the operations below on these two arrays. Your functions must be pure (no changes to the arguments).

Use the Mocha test file, arrayPracticeTests.js, for the following functions. You should add Mocha tests to the file for the reduce functions.

```
const numArray = [5,0, 7, 77, -20, 300, 51, 2]
```

```
const peopleArray = [{name: "Sam", age: 15}, {name: "William", age: 6}, {name: "Lucy", age: 13}, {name: "Barney", age: 80}]
```

map :

- double numbers
- double age

filter:

- filter all even numbers
- filter all age > 10
- find even, include even
- find age > 10, include age > 10

reduce

- find sum of numbers
- find average of numbers
- find max of numbers
- find max for ages
- use a chain of map filter reduce to find the average age of people with even number ages
- use a chain of map filter reduce to find the average age of people with odd number ages