CS303 Object Oriented and Functional Programming in JavaScript

Assignment

W1D1 Review of Functions and Arrays

Complete the following tasks from The JavaScript Language book. Implement the following in VSCode, and submit to the GitHub repository for this assignment. Try to complete the answers before looking at the solutions.

JavaScript Fundamentals > Functions

- (no implementation needed, just an answer)
- Rewrite the function using '?' or '||'
- Function min(a, b)
- Function pow(x,n)

JavaScript Fundamentals > Function expressions and arrows

- **Rewrite with arrow functions**

Data types > Arrays

- **Is array copied?**
- **Array operations.**
- **Calling in an array context**
- **Sum input numbers**
- **A maximal subarray**

Write defining tables and implement each of the following:

1. Define a function maxOfThree() that takes three numbers as arguments and returns the largest of them.
2. Define a function sum() and a function multiply() that sums and multiplies (respectively) all the numbers in an array of numbers. For example, sum([1,2,3,4]) should return 10, and multiply([1,2,3,4]) should return 24.
3. Write a function findLongestWord() that takes an array of words and returns the length of the longest one.
4. **Reverse an Array**

Arrays have a `reverse` method that changes the array by inverting the order in which its elements appear. For this exercise, write two functions, `reverseArray` and `reverseArrayInPlace`. The first, `reverseArray`, takes an array as argument and produces a *new* array that has the same elements in the inverse order. The second, `reverseArrayInPlace`, does what the `reverse` method does: it *modifies* the array given as argument by reversing its elements. Neither may use the standard `reverse` method.

```
console.log(reverseArray(["A", "B", "C"]));
```

```
// → ["C", "B", "A"];
let arrayValue = [1, 2, 3, 4, 5];
reverseArrayInPlace(arrayValue);
console.log(arrayValue);
// → [5, 4, 3, 2, 1]
```