README for ALAB 308.5.1: Creating Reusable Functions

Version 1.0, 10/13/23

Introduction

This assignment is about learning to write reusable functions to avoid repeating code (DRY principle). This

Objectives

- Create reusable functions.
- Use Array methods to manipulate data.

Instructions

1. Set up a new project folder, initialize a Git repository, and create a JavaScript file.
2. Commit frequently as you complete tasks.

Part 1: Writing Functions

Write small, simple functions to solve the tasks below:

1. Sum of Numbers: Function to return the sum of an array of numbers.
2. Average of Numbers: Function to return the average of an array of numbers.
3. Longest String: Function to return the longest string from an array.
4. Strings Longer Than Given Number: Function to return strings longer than a given length.
   - Example: stringsLongerThan(['say', 'hello', 'in', 'the', 'morning'], 3) returns ['hello', 'morning'].
5. Print Numbers Recursively: Function to print numbers from 1 to n using recursion.

Part 2: Using Array Methods

Use Array methods and callbacks to work with the data below:

```
[
  { id: "42", name: "Bruce", occupation: "Knight", age: "41" },
  { id: "48", name: "Barry", occupation: "Runner", age: "25" },
  { id: "57", name: "Bob", occupation: "Fry Cook", age: "19" },
  { id: "63", name: "Blaine", occupation: "Quiz Master", age: "58" },
  { id: "7", name: "Bilbo", occupation: "None", age: "111" }
]
```

1. Sort by Age: Sort the array by age.

2. Filter by Age: Remove entries with an age greater than 50.

3. Map and Transform: Change "occupation" to "job" and increment each age by 1.

4. Reduce for Sum and Average Age: Calculate the sum of ages, then find the average.

Part 3: Object Manipulation

Write functions to manipulate objects:

1. Increment Age: Function to increment the age field of an object. If age doesn't exist, set it to 0.

2. Copy and Increment: Function to make a copy of an object, increment age, and add or update updated_

Part 4: Practical Application

Review these skills for your upcoming Skills-Based Assessment (SBA). Reusable functions and methods a

Part 5: Review Past Assignments

Look at your past JavaScript projects and consider:

- Which parts can be turned into functions?

- How can you improve function parameters and return values?

- Can you create smaller helper functions?

Submission

Submit your project by sharing a GitHub link to your repository. Ensure all parts are committed and well-do

GitHub Repository Link

GitHub Repository for ALAB 308.5.1: git@github.com:al-XLeMEsTRE/module-308-js.git

Good Practices

- Commit Often: Commit whenever something works.

- Descriptive Names: Use clear, descriptive names for functions, inputs, and outputs.

Conclusion

This assignment helps you learn to write reusable functions, making your code more efficient and easier to