JavaScript Spread Operator Assignment

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Assignment Overview:

This assignment will help you practice using the JavaScript spread operator (...) in various contexts including arrays, objects, and functions. The spread operator allows for the expansion of an iterable (e.g., array) or an object into elements or properties.

Objectives:

- Understand and apply the spread operator with arrays and objects.
- Use the spread operator to pass arguments to functions.
- Enhance skills in manipulating data structures in JavaScript.

Tasks:

- 1. **Spread Operator with Arrays**:
 - Create two arrays, `array1` and `array2`.
- Create a new array `combinedArray` that merges `array1` and `array2` using the spread operator.
- Add a new element at the beginning, middle, and end of the `combinedArray` using the spread operator.
- 2. **Spread Operator with Objects**:

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- Create two objects, 'object1' and 'object2', each with at least three properties.
- Create a new object `combinedObject` that merges `object1` and `object2` using the spread operator. If there are overlapping properties, ensure that the properties from `object2` overwrite those from `object1`.
 - Add a new property to `combinedObject` using the spread operator.
- 3. **Spread Operator in Function Calls**:
 - Write a function `sum` that takes three arguments and returns their sum.
 - Create an array `numbers` with three numbers.
- Call the `sum` function, passing the elements of `numbers` as arguments using the spread operator.

Expected Output:

- For each task, print the result to the console.
- Explain the effect of the spread operator in each case.

Submission Guidelines:

- Submit a JavaScript file containing your solutions for the tasks.
- Include comments to explain your use of the spread operator and how it works in each context.

Assessment Criteria:

- Correct use of the spread operator in different contexts.

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- Ability to merge arrays and objects effectively.
- Correct passing of array elements as function arguments.
- Code readability and use of comments to guide the reader through your logic.

The spread operator is a powerful feature in JavaScript for working with immutable data patterns and can simplify many common tasks.