JavaScript Assignment

Functions:

1. Write a function `isPalindrome` that takes a string as input and returns `true` if it's a palindrome (reads the same backward as forward), otherwise `false`.
2. Create an arrow function `multiplyByTwo` that takes a number as input and returns its double.
3. Write a function `calculateAverage` that takes an array of numbers and returns the average value.
4. Implement a function `capitalizeFirstLetter` that capitalizes the first letter of a given string.

Control Flow:

5. Write a conditional statement that checks if a number is positive, negative, or zero, and logs an appropriate message to the console.
6. Create a switch statement that takes a day of the week as input and logs a message indicating whether it's a weekday or a weekend.

Loops:

7. Write a `for` loop that prints all even numbers from 1 to 20.
8. Implement a `while` loop that counts down from 10 to 1 and logs each number to the console.
9. Use a `do-while` loop to repeatedly prompt the user for a number until they enter a valid positive number.

Arrays:

10. Create an array of fruits and use the `forEach` method to log each fruit to the console.
11. Write a function `findMax` that takes an array of numbers as input and returns the maximum value.
12. Use the `map` method to double each element in an array of numbers.
13. Write a function `removeDuplicates` that takes an array as input and returns a new array with duplicate elements removed.
14. Implement a function `mergeArrays` that takes two arrays as input and returns a single array containing all elements from both arrays, with no duplicates.
15. Create an array of numbers and use the `filter` method to create a new array containing only even numbers.