JavaScript Task

Answer all questions

1. Create a variable to store your name and log it to the console.
2. Declare a variable to store your age and another for your favorite color. Print a sentence using both variables.
3. Write a program to check if a number is even or odd.
4. Convert a string to uppercase and lowercase and log both results.
5. Use `typeof` to determine the type of five different variables and print the results.
6. Write a function to calculate the square of a number.
7. Create a function that takes two numbers and returns their sum.
8. Write a function that greets a user with "Hello, [Name of user]!" where the name is passed as a parameter.
9. Create a function that takes a number and returns true if it is divisible by 5.
10. Write a function that converts Celsius to Fahrenheit.
11. Create an object to represent a book with properties like title, author, and year.
12. Write a function that takes a car object with `make` and `model` properties and logs "The car is a [make] [model]."
13. Add a method to an object that prints all its properties and values.
14. Update a property in an object and log the updated object.
15. Create an array of your five favorite foods and log the second item.
16. Add a new item to the end of an array and log the updated array.
17. Remove the first item from an array and log the updated array.
18. Use `indexOf` to find the position of an item in an array and log the result.
19. Combine two arrays into one using the spread operator.
20. Write a for loop to print numbers from 1 to 10.
21. Use a for-of loop to iterate through an array of colors and log each one.
22. Write a program to print the sum of numbers from 1 to 50 using a loop.
23. Create a loop that prints every second item in an array.
24. Use a nested loop to create a multiplication table for numbers 1–5.
25. Use `forEach` to log each item in an array of numbers.
26. Write a program that uses `map` to create a new array with all numbers doubled.
27. Use `filter` to create a new array of numbers greater than 10 from an original array.
28. Write a program that sorts an array of strings alphabetically.

29. Use `reduce` to find the total of all numbers in an array.
30. Create a new array by joining two arrays and removing duplicates using `filter`.
31. Use `join` to create a string from an array of words.
32. Write a program that uses `map` to create an array of object names from an array of objects.
33. Use `filter` to get all even numbers from an array of numbers.
34. Sort an array of objects by a numeric property (e.g., age).
35. Write a function that takes a number and returns its factorial.
36. Create a function that reverses a string.
37. Write a function that takes a sentence and counts the number of vowels.
38. Create a function that checks if a string is a palindrome.
39. Write a function to calculate the greatest common divisor (GCD) of two numbers.
40. Create an array of objects representing students with names and scores. Filter out students with scores less than 50.
41. Write a function that takes an array of numbers and returns the largest number.
42. Use a loop and an array method to find all prime numbers in an array.
43. Create a program that takes a sentence and returns the word with the most letters.
44. Write a program that counts the frequency of each character in a string.
45. Create an object representing a shopping cart. Add methods to calculate total cost and add/remove items.
46. Write a function that takes an array of numbers and returns the second largest number.
47. Create a function that generates a random password with specified length and characters.
48. Write a program that groups an array of strings by their first letter.
49. Console.log your experience at the Dev and Design Bootcamp
50. You have an array of objects representing students. Write a function that returns only the students who scored 50 or above.

```
const students = [
  { name: "Alice", score: 45 },
  { name: "Bob", score: 55 },
  { name: "Charlie", score: 65 },
  { name: "Diana", score: 30 }
];
```