Class and Object

Class:

- Create a `Person` class with properties `name` and `age`. Add a method `greet` that logs a greeting message including the person's name.

Object :

- Create an object `car` with properties `make`, `model`, and `year`. Add a method `getCarInfo` that returns a string with the car's details.

Class with Constructor :

- Create a `Car` class with a constructor that initializes the `make`, `model`, and `year` properties. Add a method `getCarInfo` that returns a string describing the car.

'this' keyword :

- Create a simple JavaScript function that logs the value of `this`. Call this function in the global context and explain the result.

Date Object :

- Create a `Date` object using the current date and time. Use the `toString()` method to log the date and time in a human-readable format.
- Create a `Date` object for the current date. Use `getFullYear()`, `getMonth()`, `getDate()`, `getHours()`, and `getMinutes()` methods to log the year, month, day, hour, and minute, respectively.
- Create two `Date` objects for January 1, 2024, and December 31, 2024. Compare the two dates to determine which one is earlier.
- Use the `toLocaleDateString()` method to format the current date in the format `MM/DD/YYYY`.
- Use `toLocaleTimeString()` to format the current time in the format `HH:MM:SS`.

Math object :

- Use `Math.abs()` to find the absolute value of both positive and negative numbers. Log the results.
- Use `Math.round()`, `Math.floor()`, and `Math.ceil()` to round a floating-point number (e.g., 4.7). Log the results.
- Use `Math.max()` and `Math.min()` to find the maximum and minimum values from a set of numbers. Log the results.
- Use `Math.pow()` to calculate the power of a number. Compute `2^3` and `5^2`, and log the results.

- Use `Math.sqrt()` to find the square root of a number. Compute the square root of 16 and 25, and log the results.
- Use `Math.random()` to generate a random number between 0 and 1. Log the result.
- Use `Math.PI` to calculate the circumference of a circle with a radius of 5. Log the result.

Array method :

1. `forEach` Method

- Create an array of numbers and use the `forEach` method to log each number to the console.

2. `map` Method

- Create an array of strings and use the `map` method to create a new array with the strings converted to uppercase.

3. `filter` Method

- Create an array of numbers and use the `filter` method to create a new array containing only the even numbers.

4. `reduce` Method

- Create an array of numbers and use the `reduce` method to calculate the sum of all numbers.

5. `find` Method

- Create an array of objects representing people with `name` and `age` properties. Use the `find` method to get the first person who is older than 30.

6. `some` and `every` Methods

- Use the `some` method to check if any number in an array is greater than 10.

7. `sort` Method

- Create an array of numbers and use the `sort` method to sort them in ascending order. Then, sort them in descending order.

8. `concat` Method

- Create two arrays and use the `concat` method to merge them into a single array.

String methods :

- Use `String.length` to find the length of a string. Log the result.
- Use `String.concat()` to concatenate two strings and log the result.
- Use `String.trim()` to remove whitespace from both ends of a string and log the result.
- Use `String.indexOf()` to find the index of a substring within a string. Log the result.
- Use `String.includes()` to check if a string contains a specific substring. Log the result.
- Use `String.slice()` to extract a portion of a string. Extract 'World' from 'Hello, World!' and log the result.
- Use `String.substring()` to extract a substring from a string. Extract 'Hello' from 'Hello, World!' and log the result.
- Use `String.substr()` (deprecated but still used) to extract a substring. Extract 'World' from 'Hello, World!' and log the result.
- Use `String.toUpperCase()` to convert a string to uppercase and log the result.
- Use `String.toLowerCase()` to convert a string to lowercase and log the result.
- Use `String.replace()` to replace a substring with another substring. Replace 'World' with 'Universe' in 'Hello, World!' and log the result.
- Use `String.split()` to split a string into an array of substrings. Split 'one,two,three' by commas and log the result.
- Use `String.repeat()` to repeat a string a specific number of times. Repeat 'Hello ' three times and log the result.