Shallow and Deep Copy

Shallow Copy:

A shallow copy duplicates the top-level properties of an object or array, but the nested objects or arrays are shared between the original and the copy. Any changes to these nested objects in the copy will also affect the original.

Methods:

`Object.assign()`: Copies properties from one or more source objects to a target object.

- Spread Syntax (`...`): Spreads the elements of an object or array into a new object or array.

Deep Copy:

A deep copy duplicates all levels of an object or array, creating entirely independent copies of nested objects or arrays. Changes to the deep copy do not affect the original object or array.

Methods:

`JSON.parse(JSON.stringify())`: Converts the object or array to a JSON string and then parses it back into a new object or array. This method works well for simple objects but may fail with special objects like functions, `Date`, `Map`, etc.

Recursive Function: Manually traverses the object or array to copy each level individually, ensuring that all nested structures are independently copied.