🚀 Day 12 of 60: My React Learning Journey! 🚀

1.Spread Operator

The spread operator in JavaScript, represented by three dots **(. . .),** is a powerful syntax that allows us to expand an iterable (like an array or object) into its individual elements. It is commonly used for copying, concatenating, and merging arrays or objects, among other things.

2.Using Spread Operator with Arrays

a. Copying an Array:We can create a shallow copy of an array using the spread operator.

```
const originalArray = [1, 2, 3];
const copyArray = [...originalArray];
console.log(copyArray);                              // Output: [1, 2, 3]
```

b. Concatenating Arrays:We can combine multiple arrays into one.

```
const array1 = [1, 2];

const array2 = [3, 4];

const combinedArray = [...array1, ...array2];

console.log(combinedArray);                          // Output: [1, 2, 3, 4]
```

c. Adding Elements to an Array:We can add new elements to an array by spreading the original array and including the new elements.

```
const array = [1, 2, 3];

const newArray = [0, ...array, 4];

console.log(newArray);                               // Output: [0, 1, 2, 3, 4]
```

3.Using Spread Operator with Objects

a. **Copying an Object:**We can create a shallow copy of an object.

```
const originalObject = { a: 1, b: 2 };

const copyObject = { ...originalObject };

console.log(copyObject);                             // Output: { a: 1, b: 2 }
```

b. **Merging Objects:**We can combine properties from multiple objects into one.

```
const object1 = { a: 1, b: 2 };
const object2 = { c: 3, d: 4 };
const combinedObject = { ...object1, ...object2 };
console.log(combinedObject);                    // Output: { a: 1, b: 2, c: 3, d: 4 }
```

c. **Updating Object Properties:**We can update properties in an object by spreading the original object and including the new properties.

```
const object = { a: 1, b: 2 };
const updatedObject = { ...object, b: 3, c: 4 };
console.log(updatedObject);                       // Output: { a: 1, b: 3, c: 4 }
```