flat()
&
flatMap()

ARRAY METHOD IN JAVASCRIPT

flat()

- The flat() method creates a new array with all sub-array elements concatenated into it recursively up to the specified depth.

- **Argument** - The depth level specifying how deep a nested array structure should be flattened. Default value is 1.

- The flat method removes empty slots in arrays

flat() - Examples

```
const arr = [10, 20, [40, 50]];
console.log(arr.flat());
// [ 10, 20, 40, 50 ]

const arrTwo = [10, [[20], 30]];
console.log(arrTwo.flat());
// [ 10, [ 20 ], 30 ]

const arrThree = [10, [[20, 30]]];
console.log(arrThree.flat(2)); // depth two
// [ 10, 20, 30 ]

const arrFour = [10, [[[[20, 40]]]]];
console.log(arrFour.flat(Infinity));
// [ 10, 20, 40 ]
```

flatMap()

- The flatMap() method returns a new array formed by applying a given callback function to each element of the array, and then flattening the array.

- It is identical to a map() followed by a flat().

flatMap() - Examples

1.

```
let arr = [1, [2], 3];

const resultingArr = arr.flatMap((x) => {
  return x * 3;
});

console.log(resultingArr); // [ 3, 6, 9 ]
```

2.

```
let arr = [1, [2], [[3]]];

const doubleEven = arr.flatMap((x) => {
  return x % 2 == 0 ? 2 * x : [];
});

console.log(doubleEven); // [ 4 ]
```