Array Methods

**Array Methods in JavaScript**

**1.push()** – Adds elements to the end of an array.

<!DOCTYPE html>

<html>

<body>

    <script>

        let fruits = ["Apple", "Banana"];

        fruits.push("Mango");

        document.write(fruits); // ["Apple", "Banana", "Mango"]

    </script>

</body>

</html>

2.  **pop()** – Removes the last element from an array.

<!DOCTYPE html>

<html>

<body>

    <script>

        let colors = ["Red", "Blue", "Green"];

        colors.pop();

        document.write(colors); // ["Red", "Blue"]

    </script>

</body>

</html>

3. **unshift()** – Adds elements to the beginning of an array.

<!DOCTYPE html>

<html>

<body>

    <script>

        let numbers = [2, 3, 4];

        numbers.unshift(1);

        document.write(numbers); // [1, 2, 3, 4]

    </script>

</body>

</html>

4. **shift()** – Removes the first element from an array.

<!DOCTYPE html>

<html>

<body>

    <script>

        let animals = ["Dog", "Cat", "Rabbit"];

        animals.shift();

        document.write(animals); // ["Cat", "Rabbit"]

    </script>

</body>

</html>

5. **concat()** – Merges two or more arrays into a new array.

<!DOCTYPE html>

<html>

<body>

    <script>

        let a = [1, 2];

        let b = [3, 4];

        let result = a.concat(b);

       document.write(result); // [1, 2, 3, 4]

    </script>

</body>

</html>

6. **slice()** – Returns a portion of an array without modifying the original.

<!DOCTYPE html>

<html>

<body>

    <script>

        let letters = ["A", "B", "C", "D", "E"];

        let part = letters.slice(1, 4);

        document.write(part); // ["B", "C", "D"]

    </script>

</body>

</html>

7. **splice()** – Adds, removes, or replaces elements in an array.

Removing example

<!DOCTYPE html>

<html>

<body>

    <script>

        let items = ["Pen", "Pencil", "Eraser"];

        items.splice(1, 1);

        document.write(items); // ["Pen", "Eraser"]

    </script>

</body>

</html>

Replacing example

<!DOCTYPE html>

<html>

<body>

    <script>

        let colors = ["Red", "Blue", "Green", "Yellow"];

        colors.splice(2, 1, "Purple", "Orange"); // Replaces "Green" with "Purple" and "Orange"

        document.write(colors);

    </script>

</body>

</html>

8. **indexOf()** – Returns the index of the first occurrence of an element.

<!DOCTYPE html>

<html>

<body>

    <script>

        let cars = ["BMW", "Audi", "Toyota"];

        document.write(cars.indexOf("Audi")); // 1

    </script>

</body>

</html>

9. **includes()** – Checks if an element exists in an array (returns true/false).

<!DOCTYPE html>

<html>

<body>

    <script>

        let cities = ["Delhi", "Mumbai", "Chennai"];

        document.write(cities.includes("Mumbai")); // true

    </script>

</body>

</html>

10. **map()** – Creates a new array by applying a function to each element.

<!DOCTYPE html>

<html>

<body>

    <script>

        let nums = [1, 2, 3];

        let squared = nums.map(n => n \* n);

        document.write(squared); // [1, 4, 9]

    </script>

</body>

</html>

<!DOCTYPE html>

<html>

<body>

    <script>

        let names = ["Alice", "Bob", "Charlie"];

        let uppercased = names.map(name => name.toUpperCase());

        document.write(uppercased); // ["ALICE", "BOB", "CHARLIE"]

    </script>

</body>

</html>

11. **filter()** – Returns a new array with elements that match a condition.

<!DOCTYPE html>

<html>

<body>

    <script>

        let ages = [10, 18, 22, 25];

        let adults = ages.filter(age => age >= 18);

        document.write(adults); // [18, 22, 25]

    </script>

</body>

</html>

**12.find()** – Returns the first element that matches a condition.

<!DOCTYPE html>

<html>

<body>

    <script>

        let numbers = [3, 7, 10, 15];

        let found = numbers.find(n => n > 5);

        document.write(found); // 7

    </script>

</body>

</html>

**13.sort()** – Sorts an array (default is ascending order).

<!DOCTYPE html>

<html>

<body>

    <script>

        let words = ["Banana", "Apple", "Cherry"];

        words.sort();

        document.write(words); // ["Apple", "Banana", "Cherry"]

    </script>

</body>

</html>