✅ Session 1: Iterating Over Arrays

1️⃣ `forEach()`

- Used to loop over every element in an array.

- It doesn't return anything.

```javascript
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let names = ["Elira", "Doni", "Blerina"];

names.forEach(function(name) {
  console.log("Hello " + name);
});
```

✅ *Use when you just want to do something with each item (like printing, updating DOM, etc).*

2️⃣ `map()`

- Creates a new array with the result of calling a function for every element.

- **Returns a new array** (original remains unchanged).

```javascript
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let numbers = [1, 2, 3];

let doubled = numbers.map(function(num) {
  return num * 2;
});

console.log(doubled); // [2, 4, 6]
```

✅ *Use when you want to transform an array into another array.*

3️⃣ `filter()`

- Creates a new array with all items that pass the condition (true/false test).

javascript
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```javascript
let ages = [12, 18, 22, 16];

let adults = ages.filter(function(age) {
  return age >= 18;
});

console.log(adults); // [18, 22]
```

✅ *Use when you want to filter elements from an array based on a condition.*

🎓 Practice Task (Session 1):

javascript
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```javascript
// Given this array:
let students = [
  { name: "Rinor", score: 85 },
  { name: "Era", score: 45 },
  { name: "Diellza", score: 78 },
  { name: "Blerim", score: 50 }
];

// 1. Use forEach to print all names.
// 2. Use map to create an array of scores only.
// 3. Use filter to return students with score >= 60.
```

✅ Session 2: Sorting Arrays

1 `sort()`

- Sorts array values **as strings by default**.

javascript
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```javascript
let names = ["Sara", "Doni", "Arta"];
names.sort();
console.log(names); // ["Arta", "Doni", "Sara"]
```

For numbers, use a compare function:

javascript
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```javascript
let nums = [10, 5, 30, 1];
nums.sort(function(a, b) {
  return a - b; // ascending
});

console.log(nums); // [1, 5, 10, 30]
```

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2 `reverse()`

- Reverses the order of elements in an array.

javascript
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```javascript
let letters = ["a", "b", "c"];
letters.reverse();
console.log(letters); // ["c", "b", "a"]
```

🎓 Practice Task (Session 2):

javascript
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```javascript
let cities = ["Gjakova", "Ferizaj", "Peja", "Prishtina"];
```

```
// 1. Sort cities in alphabetical order.
// 2. Reverse the sorted list.

let numbers = [88, 3, 21, 5, 13];
// 3. Sort these numbers in descending order.
```