JavaScript Arrays

Duration: 4 Hour

Basic

1. **Use the length property to find the number of elements in an array.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: 1, 2, 3, 4, 5
```

2. **Use the for...of loop to iterate through an array.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: 1, 2, 3, 4, 5
```

3. **Use the for...in loop to iterate through the indexes of an array.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: 1, 2, 3, 4, 5
```

4. **Use the Array.isArray() method to check if an object is an array.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: true
```

5. **Use the Array.from() method to convert an array-like object to an array.**

```
Example:
    Input: {0: "a", 1: "b", 2: "c", length: 3};
    Output: ["a", "b", "c"]
```

6. **Create an array of numbers and use the forEach() method to print each element to the console.**

```
Example:
    Input: [1, 2, 3, 4, 5]
    Output: [1, 2, 3, 4, 5, 6]
```

Mid

1. **Use the concat() method to combine two arrays into a single array.**

```
Example:
    Input: [1, 2, 3], [4, 5, 6];
    Output: [1, 2, 3, 4, 5, 6]
```

2. **Use the indexOf() method to find the index of a specific element in an array.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: "1,2,3,4,5"
```

3. **Use the slice() method to extract a portion of an array.**

```
Example:
    Input: [1, 2, 3, 4, 5, 6], 2, 4;
    Output: [1, 2, 5, 6]
```

4. **Use the splice() method to add and remove elements from an array.**

```
Example:
    Input: [1, 2, 3, 4, 5], 3;
    Output: 2
```

5. **Use the join() method to convert an array to a string.**

```
Example:
    Input: "1,2,3,4,5";
    Output: [1, 2, 3, 4, 5]
```

6. **Use the split() method to convert a string to an array.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: 5
```

7. **Use the Array.of() method to create an array with a set of elements.**

```
Example:
    Input: 1, 2, 3;
    Output: [1, 2, 3]
```

8. **Use the Array.prototype.fill() method to fill an array with a specific value.**

```
Example:
    Input: [1, 2, 3, 4, 5], 0, 3;
    Output: [0, 0, 0, 4, 5]
```

9. **Use the Array.prototype.copyWithin() method to copy a sequence of elements within an array.**

```
Example:
    Input: [1, 2, 3, 4, 5], 1, 3;
    Output: [1, 1, 1, 4, 5]
```

10. **Use the sort() method to sort an array of strings alphabetically.**

```
Example:
    Input: ["apple", "banana", "cherry"];
    Output: ["apple", "banana", "cherry"]
```

11. **Use the reverse() method to reverse the order of elements in an array.**

```
Example:
    Input: ["apple", "banana", "cherry"];
    Output: ["cherry", "banana", "apple"]
```

Advanced

1. **Use the map() method to square each element in an array of numbers and return a new array.**

```
Example:
    Input: [1, 2, 3, 4, 5]
    Output: [2, 4, 6, 8, 10]
```

2. **Use the filter() method to create a new array containing only even numbers from an original array.**

```
Example:
    Input: [1, 2, 3, 4, 5]
    Output: [2, 4]
```

3. **Use the reduce() method to sum up all elements in an array of numbers.**

```
Example:
    Input: [1, 2, 3, 4, 5];
    Output: 15
```