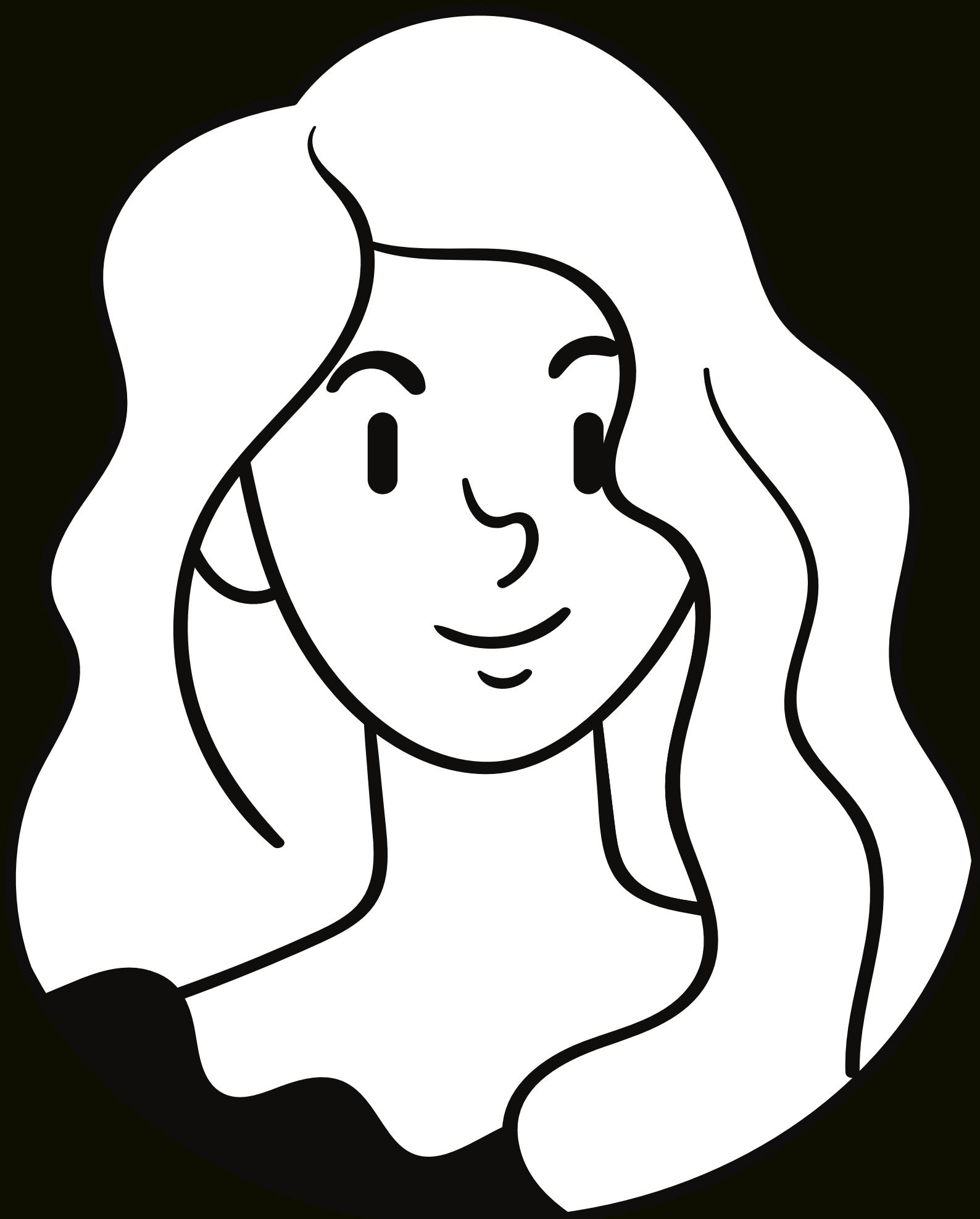


{.js}

JavaScript



JavaScript map() vs forEach()



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Map() Method

.js

The map() method is used for creating a new array from the existing one by applying a function to each one of the elements of the first array.



```
1 let nums = [3, 8, 12, 16];
2 let multy = nums.map((num) => num * num);
3 console.log(multy); // Output: [ 9, 64, 144, 256 ]
```



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forEach() method

The forEach() method receives a function as an argument and executes it once for each array element. Same like map() method.



```
1 let nums = [3, 8, 12, 16];
2 let multy = nums.forEach((num) => console.log(num * num));
3 // output: 9 64 144 256
```



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The returning value

The first difference between map() and forEach() is the returning value.

The map returns a new array with the transformed elements whereas forEach method returns undefined.



```
1 let nums = [3, 8, 12, 16];
2 let multy = nums.map((num) => num * num);
3 console.log(multy);
4 // output: [4, 16, 25, 36]
```



```
1 let nums = [3, 8, 12, 16];
2 let multy = nums.forEach((num) => num * num);
3 console.log(multy);
4 // output: undefined
```



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Ability to chain

The second difference between these array methods is the fact that `map()` is chainable.

This means that we can attach `reduce()`, `sort()`, `filter()` and so on after performing a `map()` method on an array.

That's something we can't do with `forEach()` because it returns `undefined`.



```
1 let nums = [3, 8, 12, 16];
2 let multy = nums.map((num) => num * num).reduce((acc, curr) => acc + curr);
3 console.log(multy);
4 // output: 473
```



```
1 let nums = [3, 8, 12, 16];
2 let multy = nums.forEach((num) => num * num).reduce((acc, curr) => acc + curr);
3 console.log(multy);
4 // TypeError: Cannot read properties of undefined (reading 'reduce')
```



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When to use what

- The choice between map() and forEach() will completely depend on the use case.
- If we need to change, alternate, or use the data, we should pick a map(), because as we know that it returns a new array with the transformed data.
- But, suppose we don't need the returned array, so we can skip the map() and will use forEach() or even a for loop.



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