02

USING MAP()

```
const since = [2000, 2003, 2010, 2019];
```

```
const yearsPassed = [];
for (let i = 0; i < since.length - 1; i++) {
    const sinceYear = since[i];
    yearsPassed.push(2020 - sinceYear);
}
```

=

```
const yearsPassed = since.map(year => 2020 - year);
```

```
console.log(yearsPassed);
// [ 20, 17, 10, 1 ]
```

03

USING FILTER()

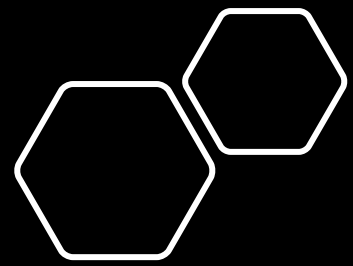
```
const people = [
    { name: 'John', age: 13 },
    { name: 'Theo', age: 15 },
    { name: 'John', age: 27 },
    { name: 'Jane', age: 30 },
];
```

```
const overagedPeople = [];
for (let i = 0; i < people.length - 1; i++) {
    const person = people[i];
    if (person.age >= 18) {
        overagedPeople.push(person);
    }
}
```

=

```
const overagedPeople = people.filter(person => person.age >= 18);

console.log(overagedPeople);
// [ { name: 'John', age: 27 }, { name: 'Jane', age: 30 } ]
```

04

USING REDUCE()

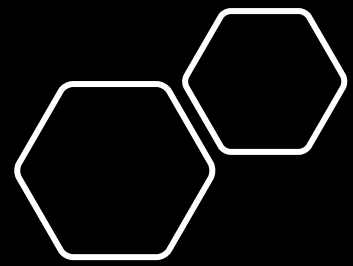
```
const numbers = [5, 10, 20];
```

```
const sum = 0;
for (let i = 0; i < numbers.length - 1; i++) {
    const number = numbers[i];
    sum += number;
}
```

=

```
const sum = numbers.reduce((oldSum, current) => (oldSum + current));
```

```
console.log(sum);
// 35
```

05

USING FOREACH()

```
const names = ['John', 'Jane', 'Anne', 'Jody'];
for (let i = 0; i < names.length - 1; i++) {
    const name = names[i];
    // Do something with each name
}
```

=

```
names.forEach(name => {
    // Do something with each name
})
```

07

USING SORT()

```
const people = [
    { name: 'Edward', age: 21 },
    { name: 'John', age: 37 },
    { name: 'Maria', age: 45 },
    { name: 'Christian', age: 5 },
];
```

```
// Bubble Sort Algorithm
for (let j = 0; j < people.length - 1; j++) {
    for (let i = 0; i < people.length - 1; i++) {
        if (people[i].age > people[i + 1].age) {
            const temp = people[i + 1];
            people[i + 1] = people[i];
            people[i] = temp;
        };
    };
};
```

=

```
const sortedByAge = people.sort((a, b) => (a.age - b.age));
```

```
console.log(people);
/* [ { name: 'Christian', age: 5 },
  { name: 'Edward', age: 21 },
  { name: 'John', age: 37 },
  { name: 'Maria', age: 45 } ] */
```

07

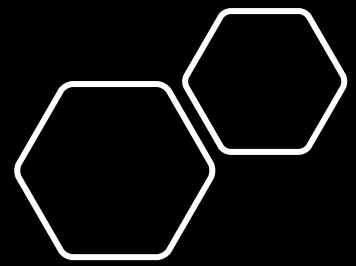
TEMPLATE LITERALS

Longhand :

```
const welcome = 'Welcome ' +first+ ' ' +last+ '.';
const db = 'http://' +host+ ':' +port+ '/' +database;
```

Shorthand :

```
const welcome = `Welcome ${first} ${last}`;
const db = `http://${host}:${port}/${database}`;
```

02

TERNARY OPERATOR

Longhand :

```
const num = 20;
let answer;

if (x > 10) {
    answer = "greater than 10";
}
else {
    answer =  "less than 10";
}
```

Shorthand :

```
const answer = x > 10 ? "greater than 10" : "less than 10";
```

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