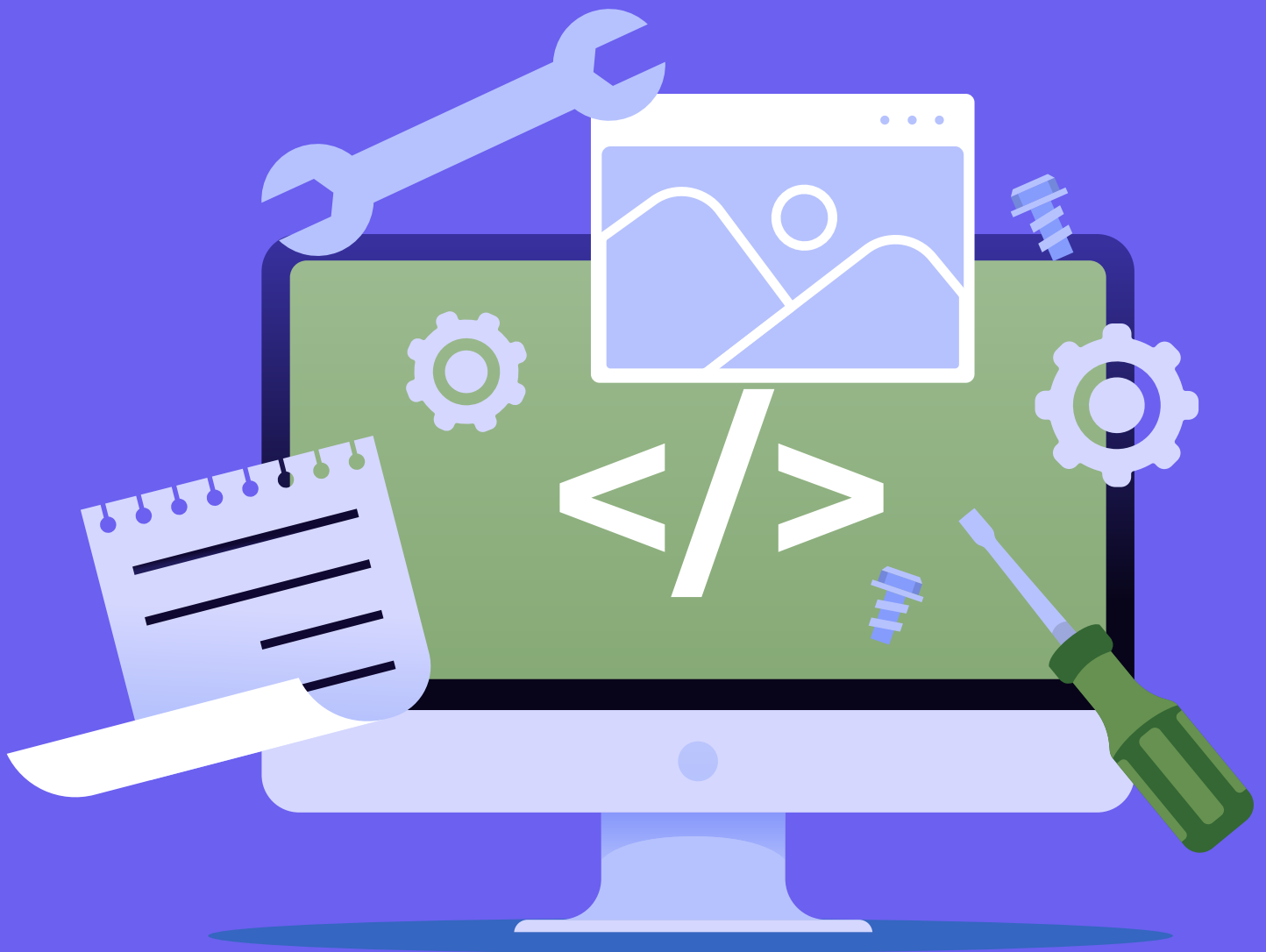


Asynchronous Programming in JS - 2

Assignment Solutions



Assignment Solutions

1. Implement a map using the Inversion of Control principle that will perform operations on an array such as:

- Squaring the elements
- Dividing them by 5.
- The root of the element
- etc

Solution: <https://jsfiddle.net/g2796jru/>

```
function performOperation(array, arrayFunction) {  
    const map1 = array.map(arrayFunction);  
    return map1;  
}  
  
const array = [1,2,3,4,25];  
  
//Squaring the elements  
console.log(performOperation(  
    array,  
    x => x * 2  
))  
  
//Dividing them by 5  
console.log(performOperation(  
    array,  
    x => x / 5  
))  
  
//The root of the elements  
console.log(performOperation(  
    array,  
    x => Math.sqrt(x)  
))
```

2. Implement a generator that will return power all the powers of 3.

Solution: <https://jsfiddle.net/atLrwjy5/>

```
function * powerOfThree(i)
{
    var count = 1;
    // Infinite Generation
    while (true) {
        yield 3 ** count++;
    }
}

var gen = powerOfThree(1);
for (var i = 0; i < 10; i++) {
    document.write(gen.next().value + "<br>");
}
```

3. Program to explain difference between Promise.all() and Promise.race().

Solution: <https://jsfiddle.net/2bhe8u7z/>

```
const promiseAllExample = [
    new Promise((resolve, reject) => setTimeout(resolve, 222, '222')),
    new Promise((resolve, reject) => setTimeout(resolve, 333, '333')),
    new Promise((resolve, reject) => setTimeout(reject, 111, '111')),
    new Promise((resolve, reject) => setTimeout(resolve, 444, '444'))
];
```

```
Promise.race(promiseAllExample)
    .then(console.log)
    .catch(console.log);
```

```
const promiseRaceExample = [
    new Promise((resolve, reject) => setTimeout(resolve, 222, '222')),
    new Promise((resolve, reject) => setTimeout(resolve, 333, '333')),
    new Promise((resolve, reject) => setTimeout(resolve, 111, '111')),
    new Promise((resolve, reject) => setTimeout(resolve, 444, '444'))
];
```

```
Promise.all(promiseRaceExample)
    .then(console.log)
    .catch(console.log);
```