JS

SYNCHRONOUS

ASYNCHRONOUS



✓ What is the difference between synchronous and asynchronous calls?

✓ What is a callback?

✓ setTimeOut to call a function after some time

ACTIVITY 1 () 10 MIN

Run code

Explain what you see on console

```
function first() {
        console.log(" 1 ");
   /function second() {
        console.log("2 ");
3 function third(color) {
        console.log("3 ", color);
    first();
   second();
    third("orange");
```

1

THEN

2

THEN

3

Synchronous means that you call a function and wait until it returns

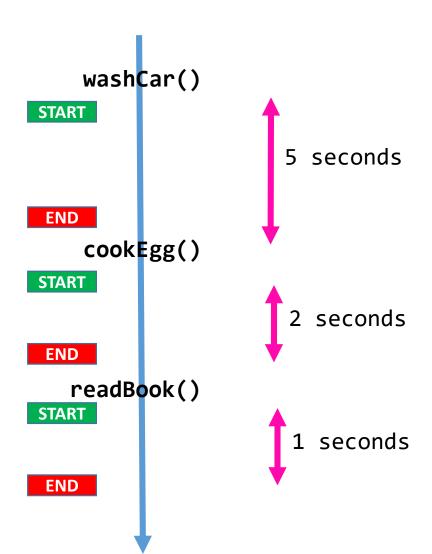
Synchronous = wait!

CODE

cookEgg();
Need 2 min

readBook();

EXECUTION



Normal function

```
function findMin(number1, number2) {
  if (number1<number2) {
    return number1;
  }
  else {
    return number2;
  }
}</pre>
```

Arrow Function

```
let findMin = (number1, number2) => {
  if (number1<number2) {
    return number1;
  }
  else {
    return number2;
  }
}</pre>
```

ACTIVITY 2 \(\) 10 MIN

Convert activity 1 function To arrow functions

SetTimeOut

```
function doSomething() {
 // code
setTimeout(doSomething, 500);
  Call this function... ... After 500ms
```

ACTIVITY 3 () 10 MIN

Run code

Explain what you see on console

DON'T WAIT FOR ME!!

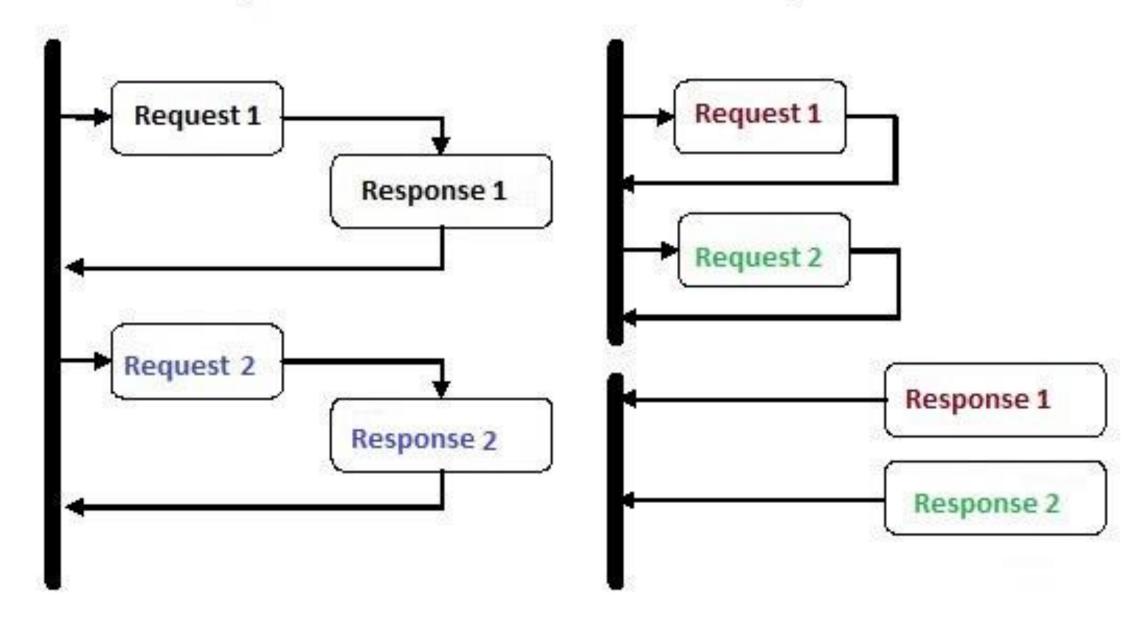


Asynchronous calls do not wait for the function call to return something.

- ✓ Execution continues
- ✓ when the function has finished , a "callback" function is executed.

Synchronous

Asynchronous

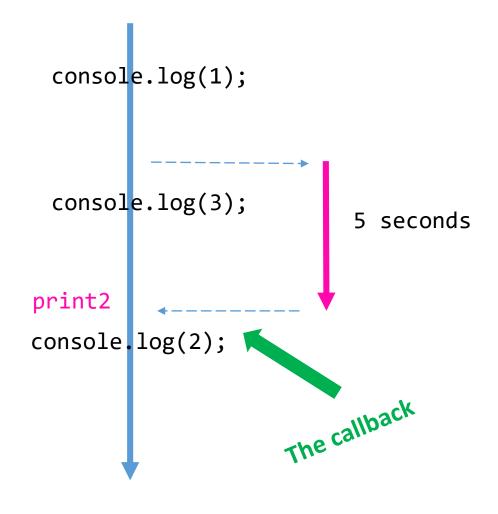


Asynchronous = don't wait!

CODE

```
function print2() {
  console.log(2);
console.log(1);
setTimeout(print2, 5);
                   After 5 seconds, call print2
console.log(3);
```

EXECUTION



What this code will print?

```
setTimeout( () => { console.log("BANANA"); }, 3000);
console.log("MANGO");
setTimeout( () => { console.log("APPLE"); }, 2000);
console.log("JACKFRUIT");
setTimeout( () => { console.log("ORANGE"); }, 1000);
```

CODE

EXECUTION

```
setTimeout( () =>
                                             console.log("MANGO");
{ console.log("BANANA"); }, 3000);
console.log("MANGO");
                                             console.log("JACKFRUIT");
setTimeout( () =>
{ console.log("APPLE"); }, 2000);
                                                                      secs
                                                                             secs
                                                                                    secs
console.log("JACKFRUIT");
                                             console.log("ORANGE");
setTimeout( () =>
 { console.log("ORANGE"); }, 1000);
                                             console.log("APPLE
                                             console.log("BANANA ");
```

What this code will print?

```
setTimeout( () => {
     setTimeout( () => { console.log("APPLE"); }, 1000);
     console.log("BANANA");
}, 3000);
setTimeout( () => { console.log("LEMON"); }, 3000);
console.log("MANGO");
setTimeout( () => { console.log("APPLE"); }, 2000);
console.log("JACKFRUIT");
```

ACTIVITY 4 () 10 MIN

Instructions are in the code

A callback, is a function that is passed as an parameter to another function;



