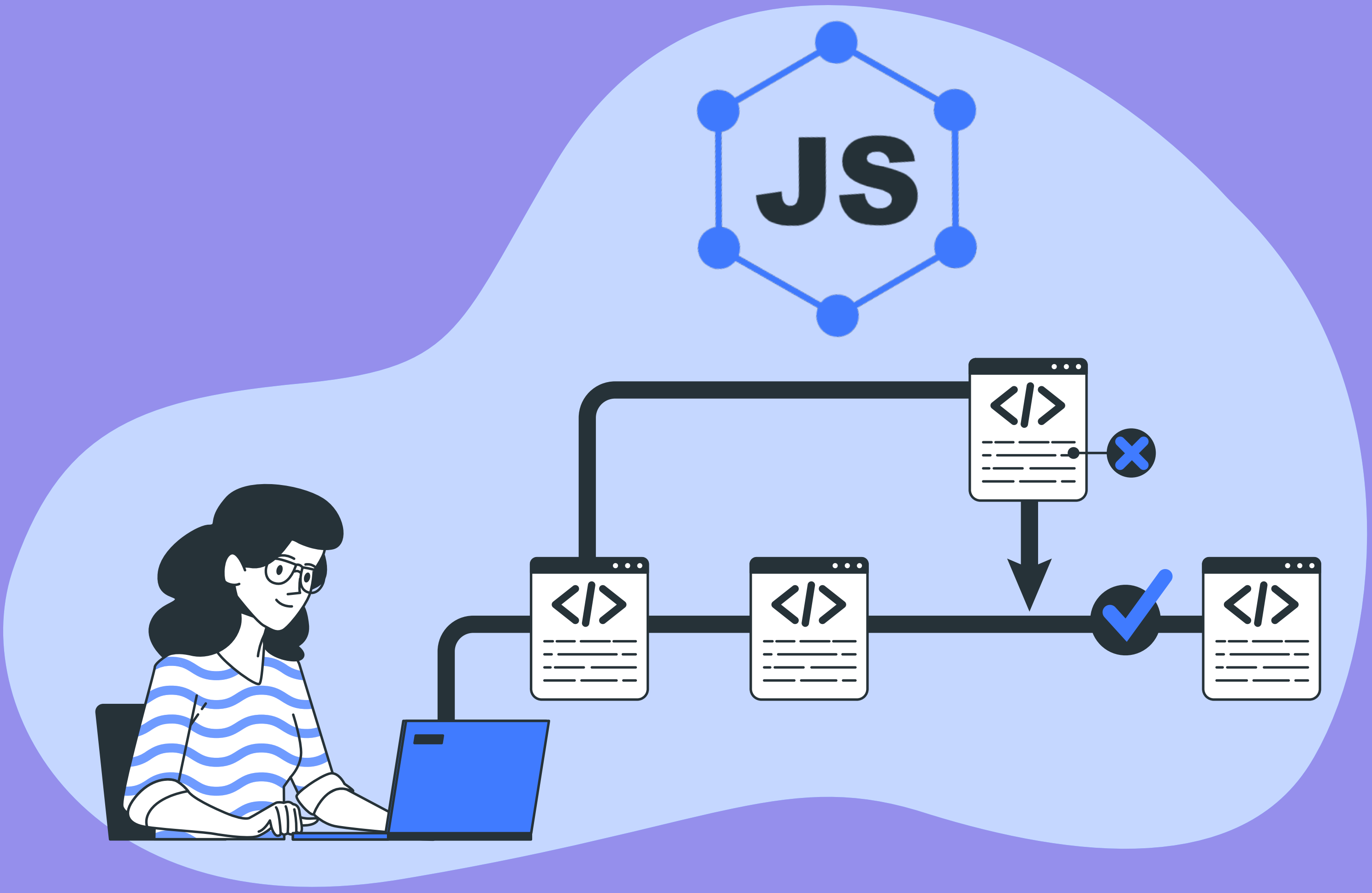
Async programming, CallBacks, Timers, CallBacks hell in Javascript Assignment Solution



Relevel
by Unacademy

1. Program to demonstrate call back hells.

```
const printAndIncrement = (num, callback) =>{
   console.log(num);
 callback(null, ++num);
}

const printAndDouble = (num, callback) =>{
   console.log(num);
 callback(null, num*2);
}

const printAndDecrement = (num, callback) =>{
   console.log(num);
 callback(null, --num);
}

const printAndNegative = (num, callback) =>{
   console.log(num);
 callback(null, -num);
}

const hell = (num) => {
   printAndIncrement(num, (err, res) => {
   printAndDouble(res, (err1, res1) =>{
       printAndDecrement(res1, (err2, res2) => {
       printAndNegative(res2, (err3, res3) =>{
           console.log(res3);
       })
     })
   })
 })
}

hell(1);
```

Solution: https://jsfiddle.net/gtgstg/o5ar6nus/172/

2. Program to demonstrate timing events in JS.

```
var count = 10;
let x,y;
var timer = function(){
 x = setTimeout(function(){
   console.log("Timeout: " + count);
   if(count == 4){
     clearTimeout(x);
     console.log("Timeout Ended");
   }
   else{
     count--;
     timer();
   }
 }, 1000);
}

timer();

let time = 10;
y = setInterval(function () {
 console.log("Interval: " + --time);
 if (time === 0) {
   console.log("hello");
   clearInterval(y);
 }
}, 10000)
```

Solution: https://jsfiddle.net/gtgstg/o5ar6nus/213/

3. Program to demonstrate synchronous and asynchronous functions.

```
function f1() {
   console.log('f1');
  }

  function f2() {
      console.log('f2');
  }

  function f3() {
      console.log('f3');
  }

  function main() {
    console.log('main');

    setTimeout(f1, 50);
    setTimeout(f3, 30);

    new Promise((resolve, reject) =>
      resolve('I am a Promise, right after f1 and f3! Really?')
    ).then(resolve => console.log(resolve));

    new Promise((resolve, reject) =>
      resolve('I am a Promise after Promise!')
    ).then(resolve => console.log(resolve));

    f2();
  }

  //Synchronous calls
  f1();
  f2();
  f3();

  //For async uncomment this
  //main();
```

Solution: https://jsfiddle.net/gtgstg/o5ar6nus/216/