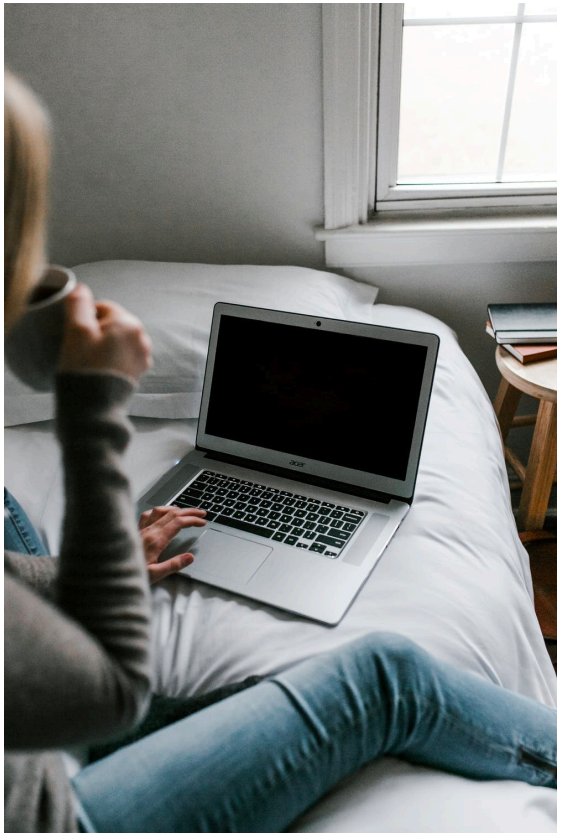
Codergirl - JavaScript

Class 7

September 9, 2020

Agenda

- Studio recap – 6:10 pm
- Lecture – 6:40 pm
- Exercise – 7pm



Studio recap

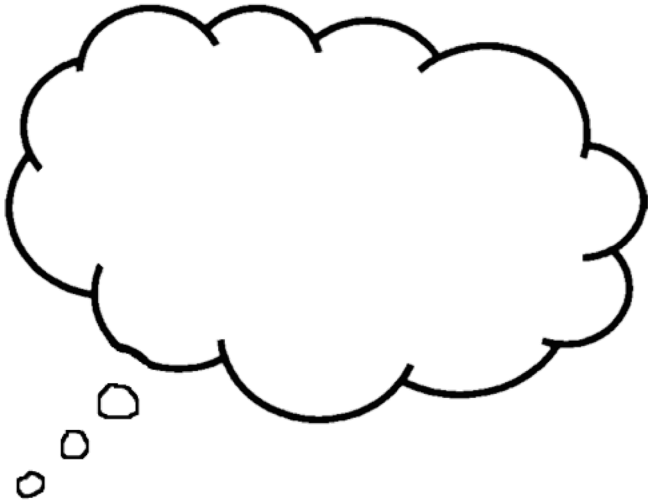
Sort an Array

1. Find the minimum value in an array
2. Loop through the array, call the function that finds the min value.
3. Remove it from original array and add to the new array.
4. Repeat loop until original array is empty.

OR

- Use the Array sort function!
- Bonus: Sort using recursion.

...



...

Array spread operator

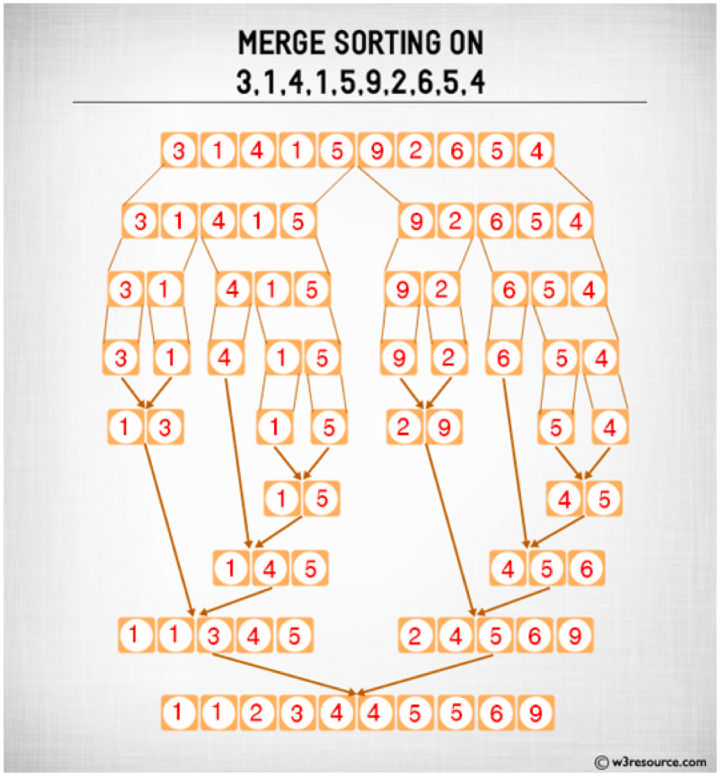
```
let numbers1 = [1, 2, 3, 4, 5];
let numbers2 = [ ...numbers1, 1, 2, 6,7,8];
// this will be [1, 2, 3, 4, 5, 1, 2, 6, 7, 8]
```

Array Shift

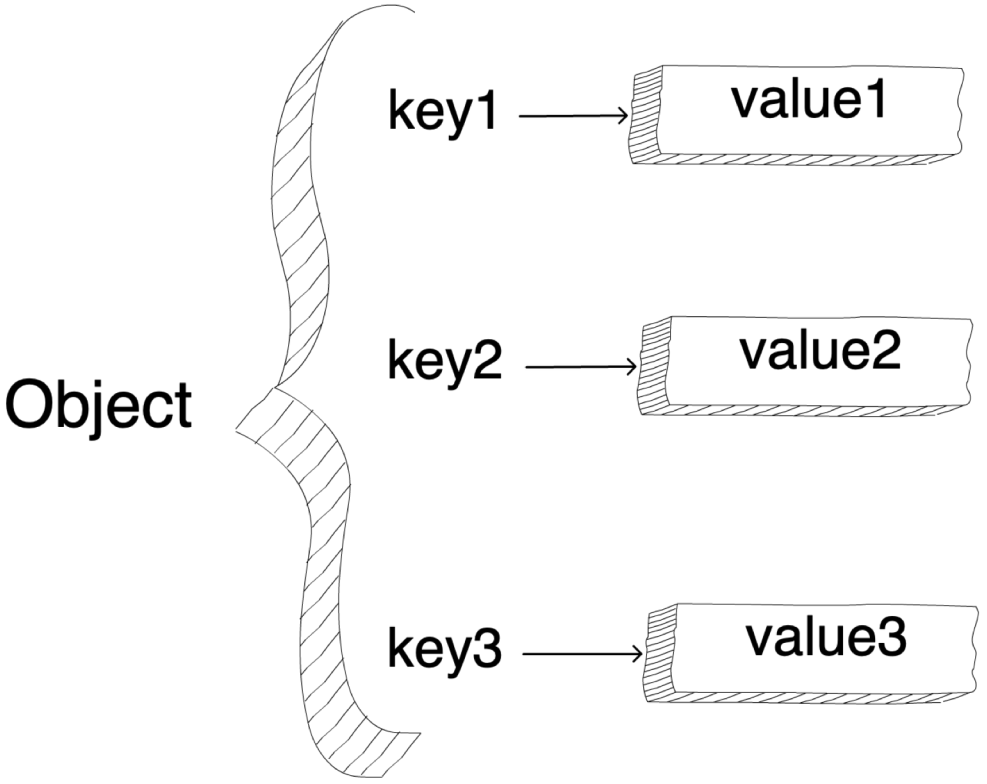
```
 let array1 = [1, 2, 3];

let firstElement = array1.shift();


console.log(array1);

// expected output: Array [2, 3]


console.log(firstElement);

//expected output: 1
```

Whiteboard

Recursion sorting



Objects



Example of Object

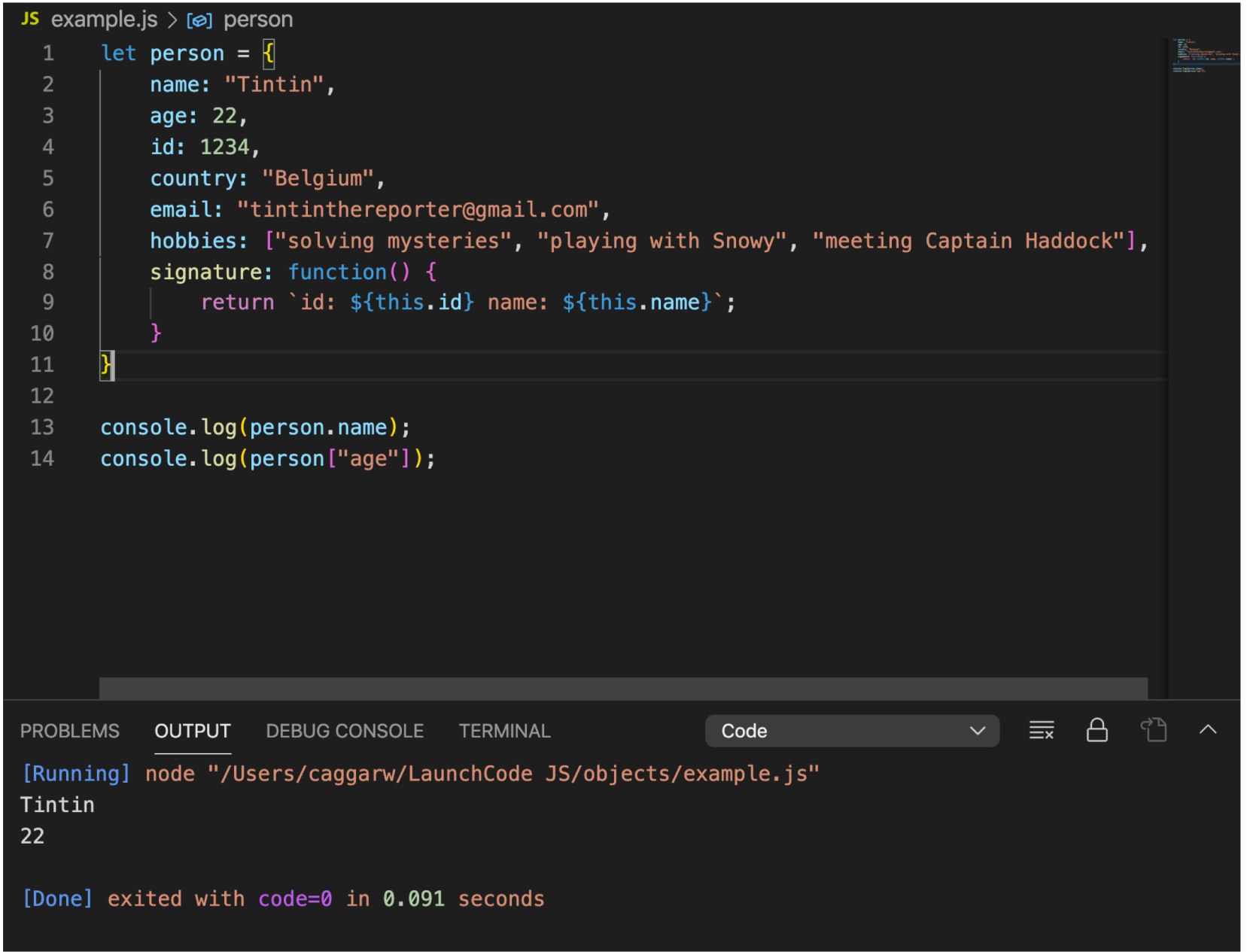
```
let person = {
    name: "Tintin",
    age: 22,
    id: 1234,
    country: "Belgium",
    email: "tintinthereporter@gmail.com",
    hobbies: ["solving mysteries", "playing with Snowy", "meeting Captain Haddock"],
    signature: function() {
        return `id: ${id} name: ${name}`;
    }
}
```

Working with Objects

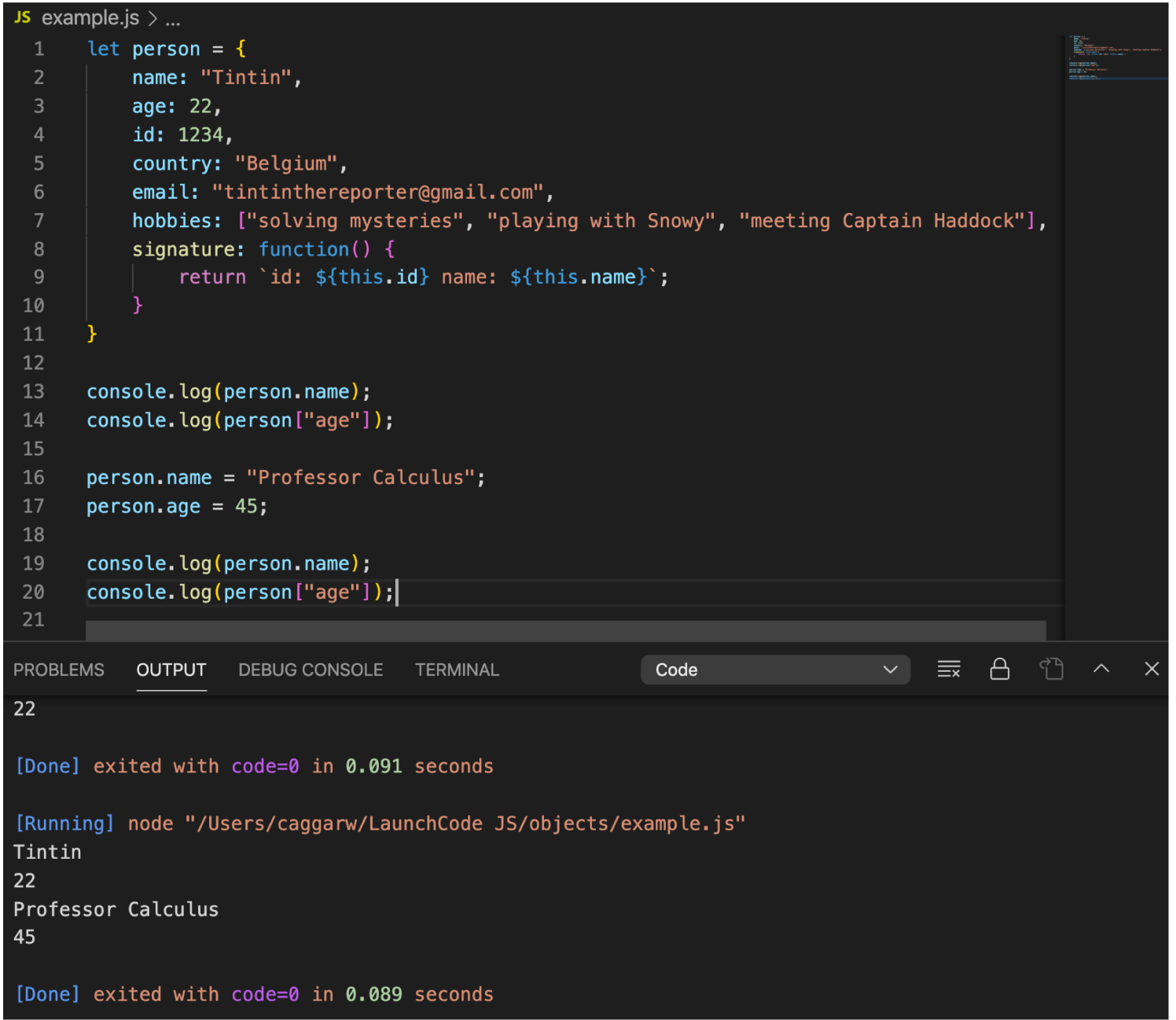
this keyword can be used to refer to an object within an object

shorthand for objects name.

Accessing properties



Modifying properties



Adding properties

JS example.js > ...

```
1       let person = {
2           name: "Tintin",
3           age: 22,
4           id: 1234,
5           country: "Belgium",
6           email: "tintinthereporter@gmail.com",
7           hobbies: ["solving mysteries", "playing with Snowy", "meeting Captain Haddock"],
8           signature: function() {
9               return `id: ${this.id} name: ${this.name}`;
10          }
11      }
12
13  person.sex = 'M';
14
15  console.log(person);
16
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
[Running] node "/Users/caggarw/LaunchCode JS/objects/example.js"
{ name: 'Tintin',
  age: 22,
  id: 1234,
  country: 'Belgium',
  email: 'tintinthereporter@gmail.com',
  hobbies:
   [ 'solving mysteries',
     'playing with Snowy',
     'meeting Captain Haddock' ],
  signature: [Function: signature],
  sex: 'M' }
```

Coding with Objects

JS exampleComparison.js > ...

```
1   let detective1 = {
2       name: "Tintin",
3       age: 22
4   }
5
6   let detective2 = {
7       name: "Tintin",
8       age: 22
9   }
10
11  console.log(`detective1 === detective2 is ${detective1 === detective2}`);
12  console.log(`detective1 == detective2 is ${detective1 == detective2}`);
13  console.log(`detective1.age === detective2.age is ${detective1.age === detective2.age}`);
14  console.log(`detective1.name === detective2.name is ${detective1.name === detective2.name}`);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL Code

```
[Running] node "/Users/caggarw/LaunchCode JS/objects/exampleComparison.js"
detective1 === detective2 is false
detective1 == detective2 is false
detective1.age === detective2.age is true
detective1.name === detective2.name is true

[Done] exited with code=0 in 0.095 seconds
```

loop

```
1   let person = {
2       name: "Tintin",
3       age: 22,
4       id: 1234,
5       country: "Belgium",
6       email: "tintinthereporter@gmail.com",
7       hobbies: ["solving mysteries", "playing with Snowy", "meeting Captain Haddock"]
8   }
9
10  for (item in person) {
11      console.log(item + ': ' + person[item]);
12  }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL Code

```
[Running] node "/Users/caggarw/LaunchCode JS/objects/exampleFor.js"
name: Tintin
age: 22
id: 1234
country: Belgium
email: tintinthereporter@gmail.com
hobbies: solving mysteries,playing with Snowy,meeting Captain Haddock

[Done] exited with code=0 in 0.089 seconds
```

...

Object spread operator

JS exampleObjectSpread.js > ...

```
1   let person = {
2       name: "Tintin",
3       age: 22,
4       id: 1234,
5       country: "Belgium",
6   }
7
8   let tintin = {
9       ...person,
10      sex: "M"
11  }
12
13  console.log(person);
14  console.log(tintin);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL Code

```
[Running] node "/Users/caggarw/LaunchCode JS/objects/exampleObjectSpread.js"
{ name: 'Tintin', age: 22, id: 1234, country: 'Belgium' }
{ name: 'Tintin', age: 22, id: 1234, country: 'Belgium', sex: 'M' }
```

Math

built in object – 8 properties

methods

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math

Not modifiable

Math methods

2. MDN Web Docs

To see detailed examples for a particular method, click on its name.

Ten Common Math Methods

Method	Syntax	Description
abs	`Math.abs(number)`	Returns the positive value of `number`.
ceil	`Math.ceil(number)`	Rounds the decimal `number` UP to the closest integer value.
floor	`Math.floor(number)`	Rounds the decimal `number` DOWN to the closest integer value.
max	`Math.max(x,y,z,...)`	Returns the largest value from a set of numbers.
min	`Math.min(x,y,z,...)`	Returns the smallest value from a set of numbers.
pow	`Math.pow(x,y)`	Returns the value of x raised to the power of y (x^y).
random	`Math.random()`	Returns a random decimal value between 0 and 1, NOT including 1.
round	`Math.round(number)`	Returns `number` rounded to the nearest integer value.
sqrt	`Math.sqrt(number)`	Returns the square root of `number`.
trunc	`Math.trunc(number)`	Removes any decimals and returns the integer part of `number`.

Exercise

Questions?

https://www.amazon.com/How-Women-Rise-Holding-Promotion/dp/0316440124

PART II

The Habits That Keep Women from Reaching Their Goals

Studio time!