



# Loops

# Loops

Loops are for doing something multiple times

Several different types, still all for **doing something multiple times**

for

while

for...in

for...of



# for

Usually, a for loop does something a **predefined** number of times

Comprised of 4 parts:

- Counter
- Condition
- Increment
- Code to execute

# for

Counter: number starts at 0

Condition: number is less than 10

Increment: increase number by 1

Code to execute: whatever you want

# for

```
for(let number = 0; number < 10; number++) {  
  console.log(`hello ${number}!`);  
}
```



# for

Most often, we want to execute some code for each element in an array

```
for(let index = 0; index < array.length; index++) {  
    console.log(`hello ${array[index]}`!);  
}
```

# for

To the code editor



# for

Any questions on for loops?





# while

While loops are used to execute some code an unknown number of times

While a condition is true, execute some code

As soon as the condition is false, the code won't execute

# while

```
let number = 0;
```

```
while(number < 10) {  
    number++;  
}
```



# while

```
let number = 1;  
  
while(number > 0) {  
    number++;  
}
```

# while

To the code editor



# while

Any questions on while loops?

# for...in

For all of the keys in an object, execute some code

This is called iteration

# for...in

```
const person = {name: "Sam", age: 29};
```

```
for(let key in person) {  
    console.log(key, person[key]);  
}
```



## for...in

```
const sizes = ['S', 'M', 'L'];  
  
for(let key in sizes) {  
  console.log(key, sizes[key]);  
}
```

What will this log out?



# for...in

To the code editor



# for...of

Where `for...in` iterates over keys, `for...of` iterates over values

This is useful when dealing with arrays

## for...of

```
const sizes = ['S', 'M', 'L'];  
  
for(let value of sizes) {  
  console.log(value);  
}
```



# for...of

To the code editor



# Loops

Any questions on loops?

