

Nation Code

JavaScript Fundamentals

Dot Notation



Learning Objectives

- } To understand dot notation
- } To understand different data types
- } To create simple programs, e.g. generate a random number



JavaScript

The language of the web

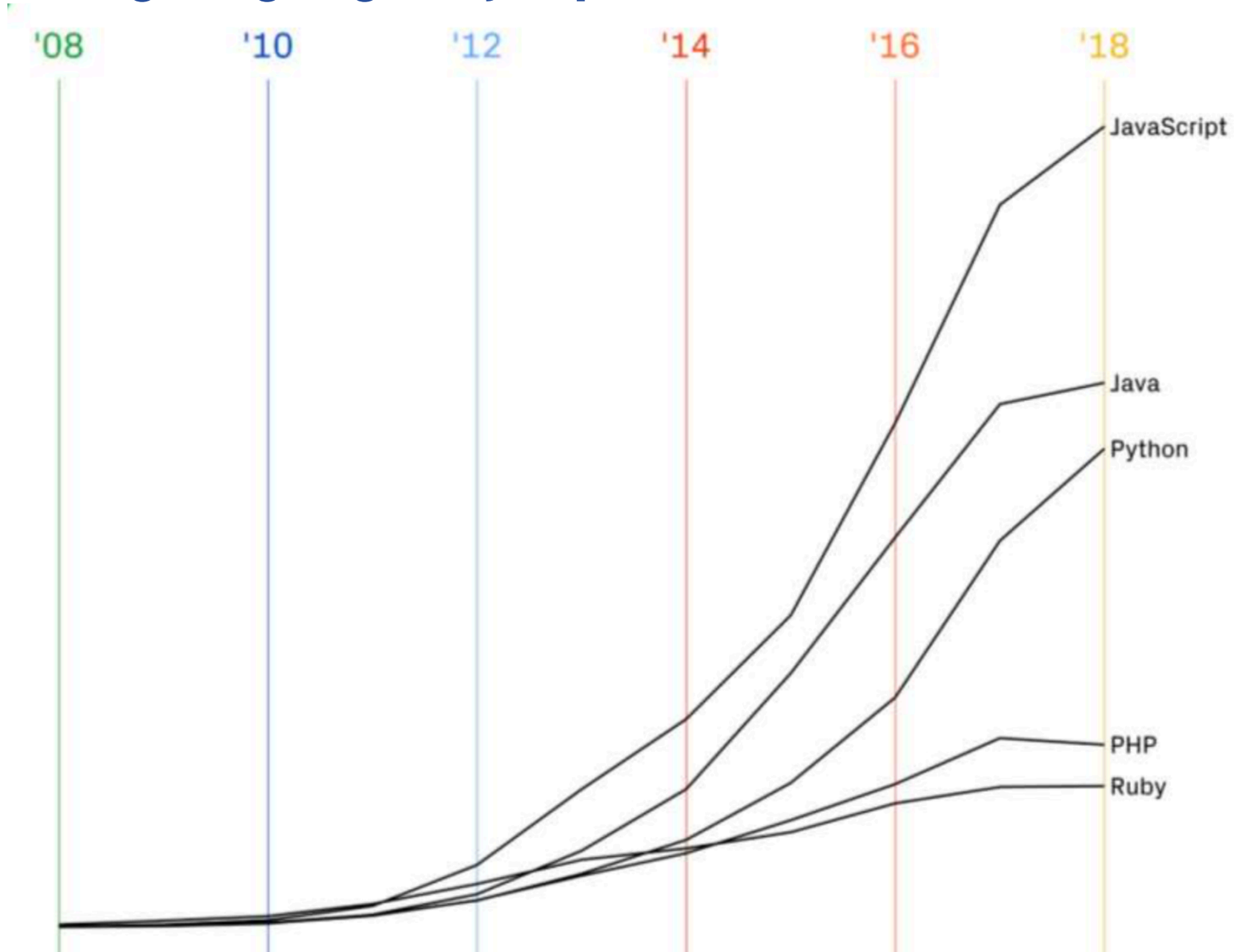
Full-stack

Not limited to websites

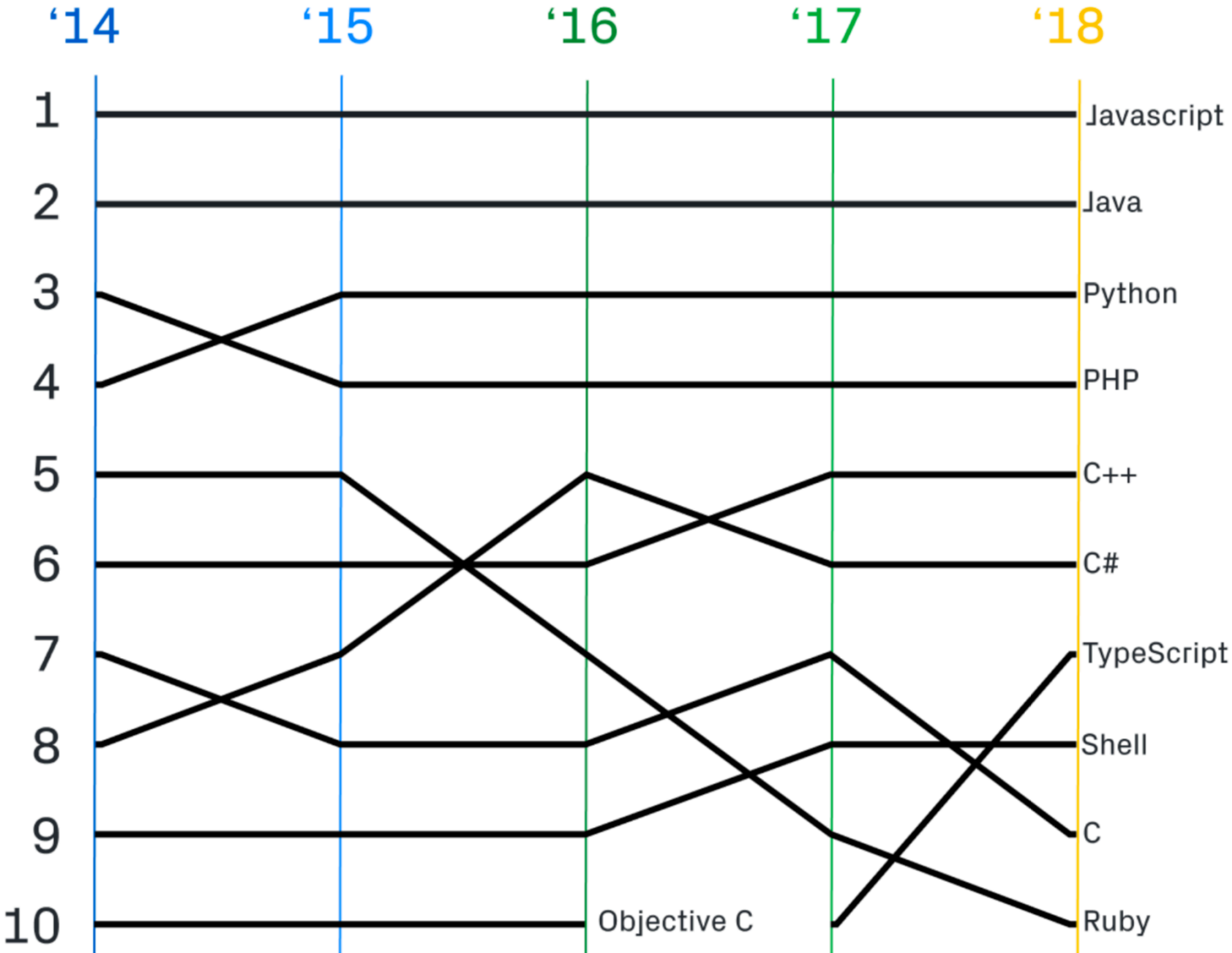


It's also pretty much the most popular language in the world

Top programming languages by repositories created, 2008–2018 {Cn}[®]



Rank of top programming languages over time





**Tl;dr? A very good language
to learn!**

Using the console

um... what's a console?



Dot notation

```
console.log(i);
```



Dot notation

```
console.log(i);
```

```
object.property;
```

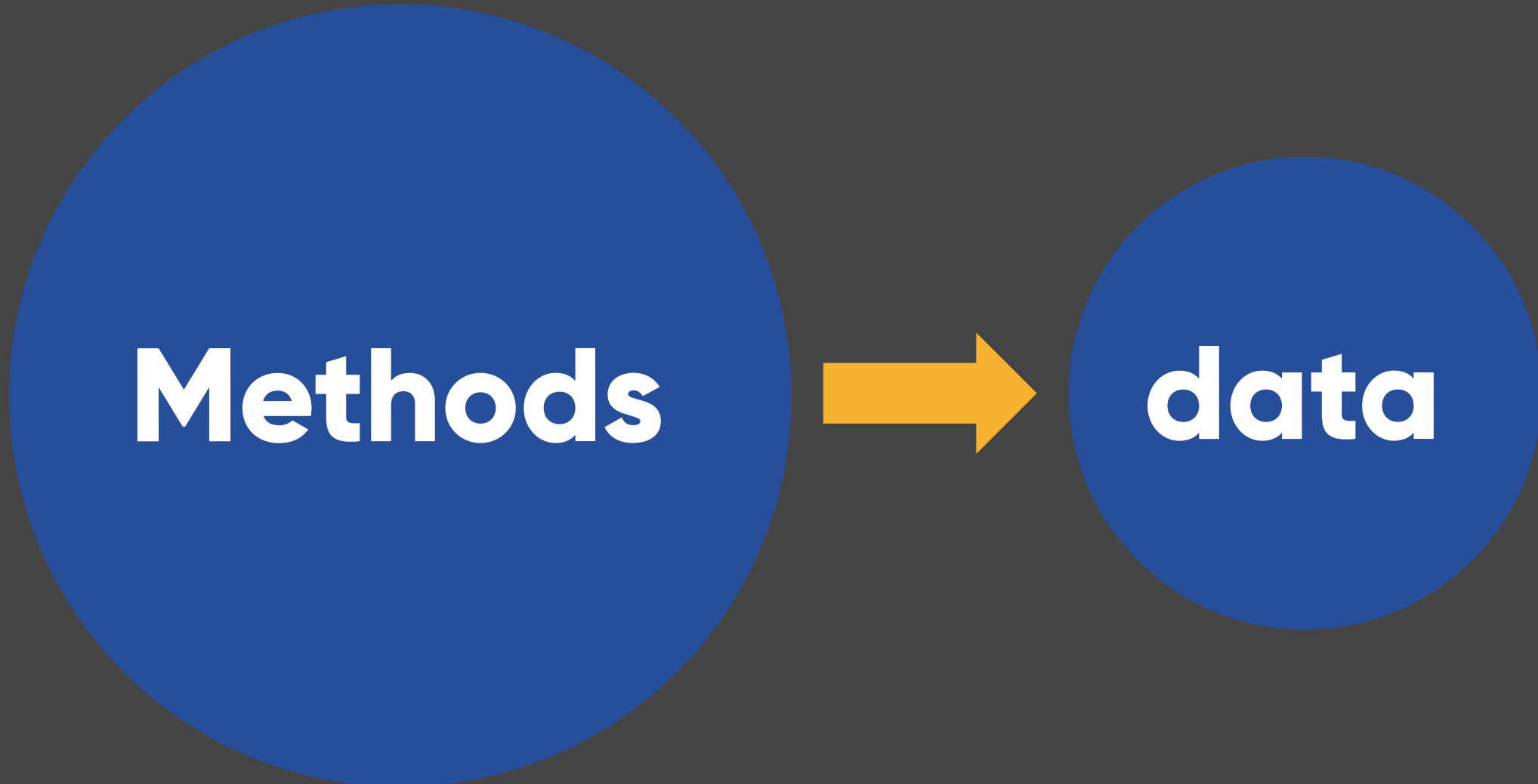


```
car.startEngine();  
dev.makeCoffee();
```

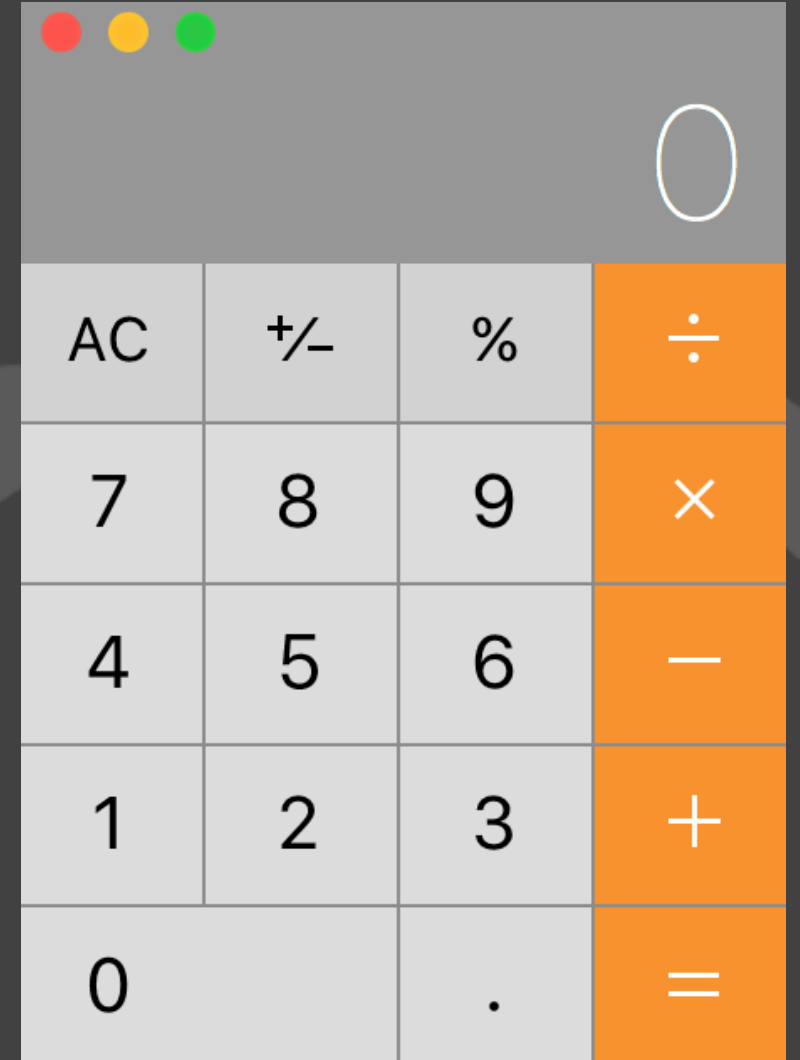


Everyone loves a bit of
data

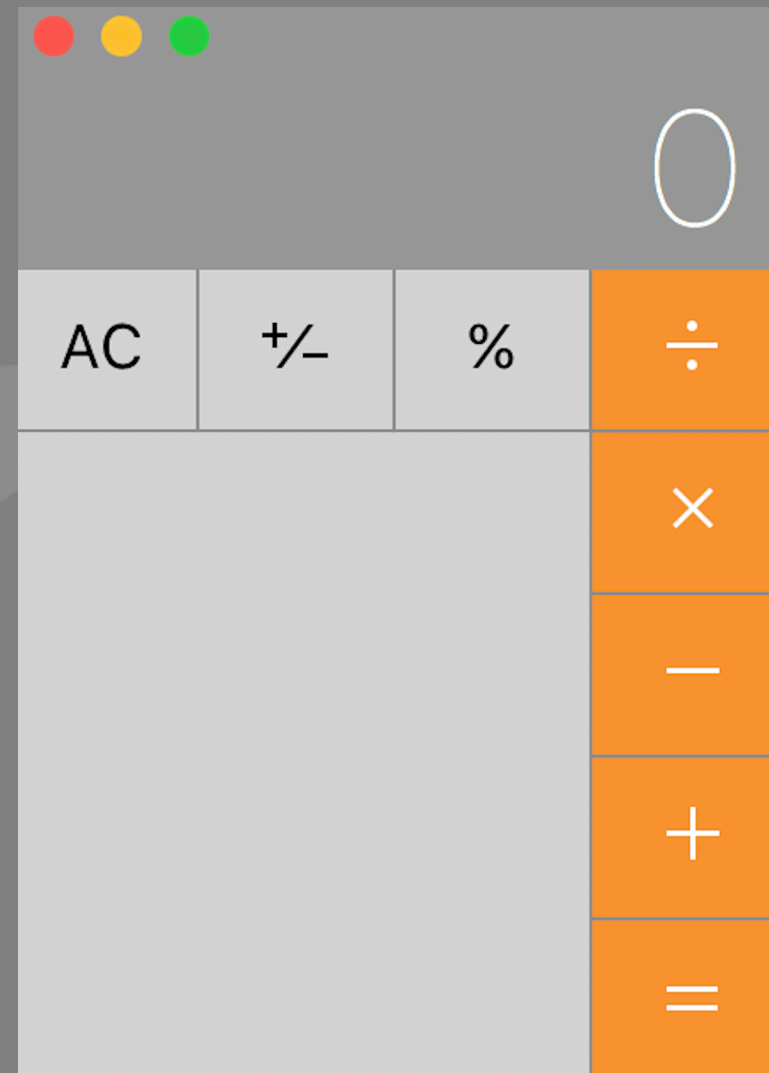
**If we break coding down to its
simplest and snappiest**



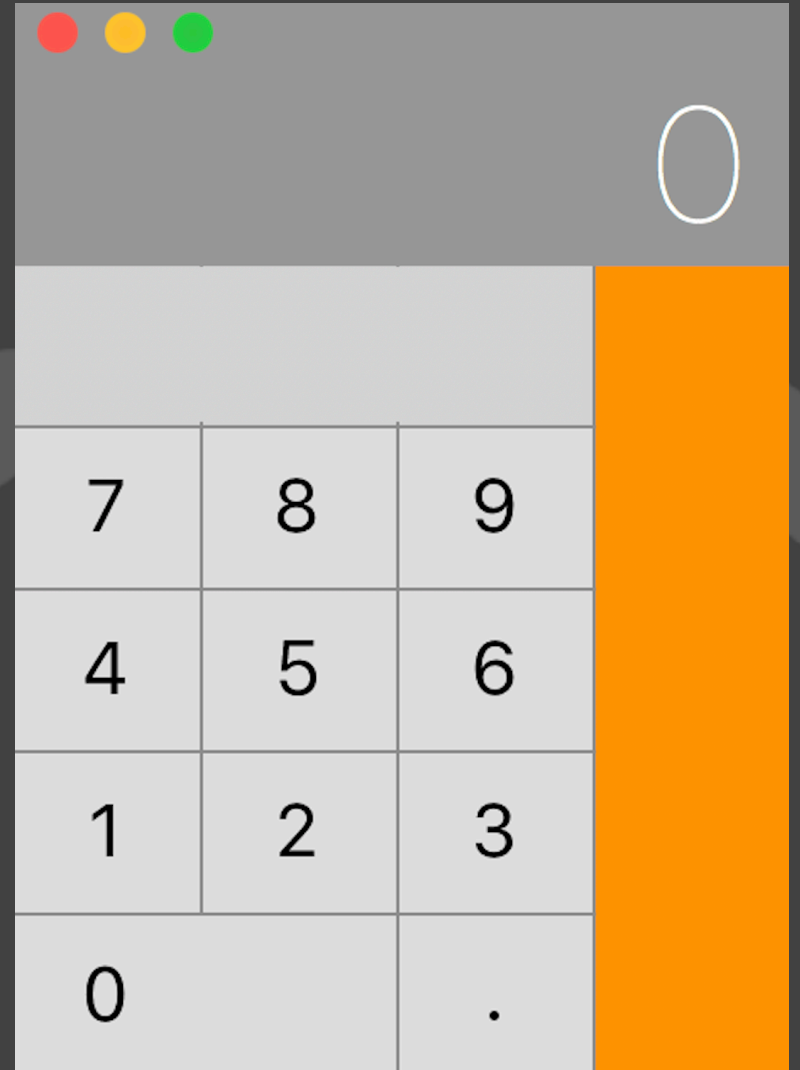
Everyone loves a calculator



**But how much
would you love it if
you took this to
your maths exam?**



**Perhaps the
cruellest of them
all!**





**Methods and data,
intimately linked.**



Working with **data types**

'Data types' refers to the kind(s) of data that we're asking the computer to work with



Working with **data types**

In JavaScript, we have a few simple
(**primitive** is the technical posh word)
kinds of data



String : for representing text

Number : for representing numbers (decimal and integers)

Boolean : for true and false

Null : for nothing

Undefined : for when a data type isn't determined

Symbol : This data type is used as the key for an object property when the property is intended to be private, for the internal use of a class or an object type



Get off on my



data

.property

Let's look at a string

} Strings have associated data or additional information available



A diagram consisting of two overlapping circles. The larger circle on the left is blue and contains the word "string" in white. The smaller circle on the right is yellow and contains the word "length" in white. They are set against a dark gray background with faint, light gray curved lines.

string

length

Let's look at a string

} Strings have associated data or additional information available

How many letters in
"Hello"?

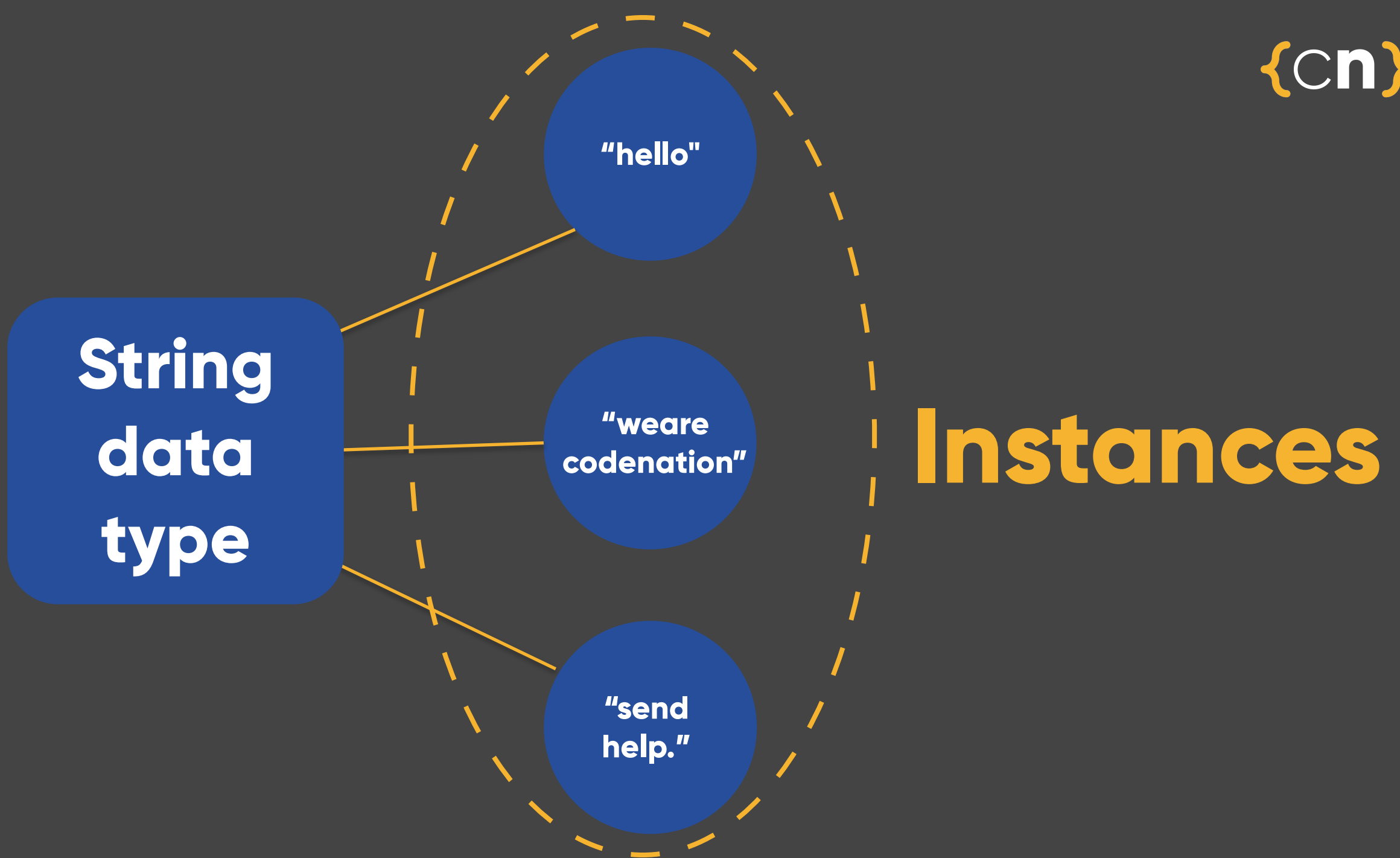
A diagram featuring two overlapping circles. The larger circle in the foreground is blue and contains the word 'string' in white. The smaller circle in the background is yellow and contains the word 'length' in white. Both circles are partially covered by a large, light gray arc that sweeps across the bottom right of the slide.

string

length



```
console.log("Hello".length);
```



These instances live in the
computer's memory (**R**andom
Access **M**emory)

The **HEAP**



.method()

in the madness..



The built-in **data types** have
built-in associated **methods**

`toLowerCase()`

`length`

`trim()`

`string`

`toUpperCase()`

**Strings have methods
that we can use to
manipulate them**



```
console.log("Hello".toUpperCase());
```

Ssh. Libraries

In coding, libraries give us
access to a bunch of features
that we **don't** have to code
ourselves

Insert the breakfast club fist raise here



```
console.log(Math.Random());
```

== what?



```
console.log(Math.Random()*10);
```

== what?



```
console.log(Math.floor(Math.Random()*10));
```

== what?

Learning Objectives – recap

- } To understand dot notation
- } To understand different data types
- } To create simple programs, e.g. generate a random number

**Have a go at logging
a grid like this to the
console**

