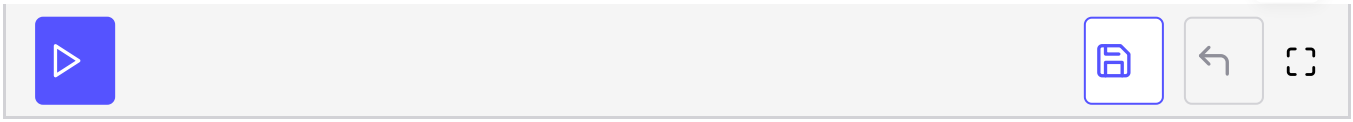
Number Extensions

in-built methods in ES6 to play with numbers

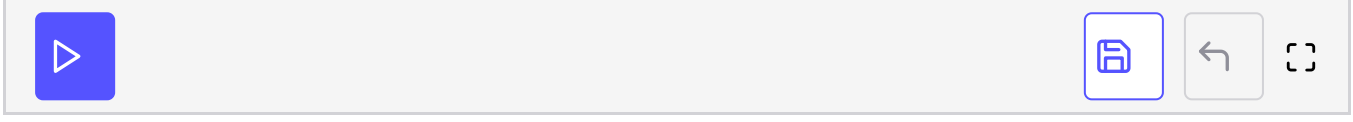
Finally, ES6 gives you a built-in `isInteger` check. Earlier, we had to implement different tricks to determine if a number is an integer. These tricks were not too semantic. In ES6, all we need to do is call

```
console.log(Number.isInteger( 5 ));
```



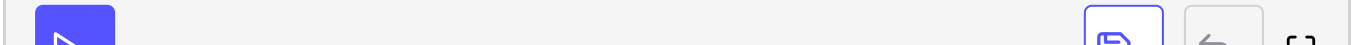
Safe integers are integers that can be represented in JavaScript without loss of precision.

```
let maxVal = Number.MAX_SAFE_INTEGER;
let minVal = Number.MIN_SAFE_INTEGER;

console.log(Number.isSafeInteger( maxVal ));
//> true

console.log(Number.isSafeInteger( maxVal + 1 ));
//> false
```



`Number.EPSILON` represents the difference between one and the smallest value greater than one. We can use this constant to compare values against each other considering that arithmetic operations may be distorted. Example:

```
console.log( 0.1 + 0.2 <= 0.3 );
//> false

console.log( 0.1 + 0.2 <= 0.3 + Number.EPSILON );
//> true
```



The `parseInt` and `parseFloat` methods are now available from the `Number` object. In order to provide more context, I recommend using `Number.parseInt` and `Number.parseFloat` from now on.

```
// base 10 = decimal input (default):
console.log(Number.parseInt( '1234', 10 ));
//> 1234

// base 16 = hexadecimal input:
console.log(Number.parseInt( 'ff', 16 ));
//> 255

console.log(Number.parseFloat( '1.2' ));
//> 1.2
```

The global `isFinite` and `isNaN` functions are also available in the `Number` object.

```
console.log(Number.isFinite( 5 ));
//> true

console.log(Number.isNaN( 0/0 ));
//> true
```

There is one difference between the old global functions and the new `Number` methods:

```
console.log( isFinite( '0' ), Number.isFinite( '0' ) );
//> true false

console.log(
    isNaN( 'IamNotANumber' ),
    Number.isNaN( 'IamNotANumber' ) );
//> true false
```

The old global methods convert strings into numbers. The corresponding

`Number` methods keep the types.

In the next chapter, we will study some features that Es2016 provides us and how they make writing javascript code easier.