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EP 2 : Var vs Let vs Const, Types, Type Conversion and Function

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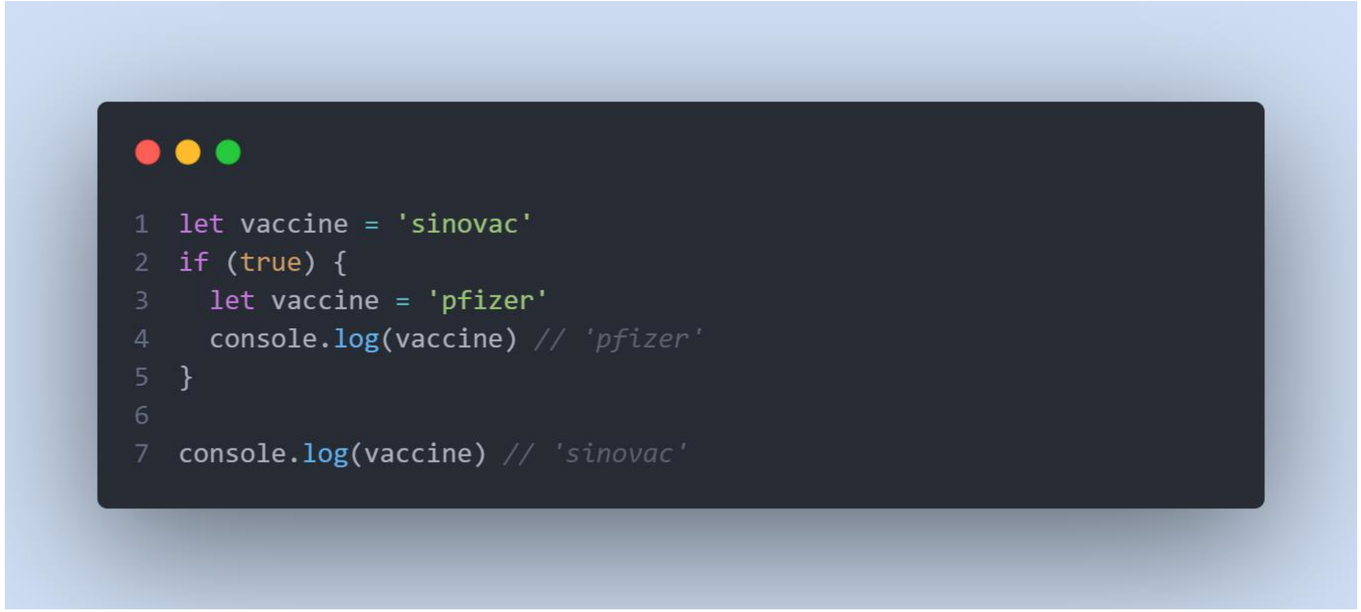
Var vs Let vs Const

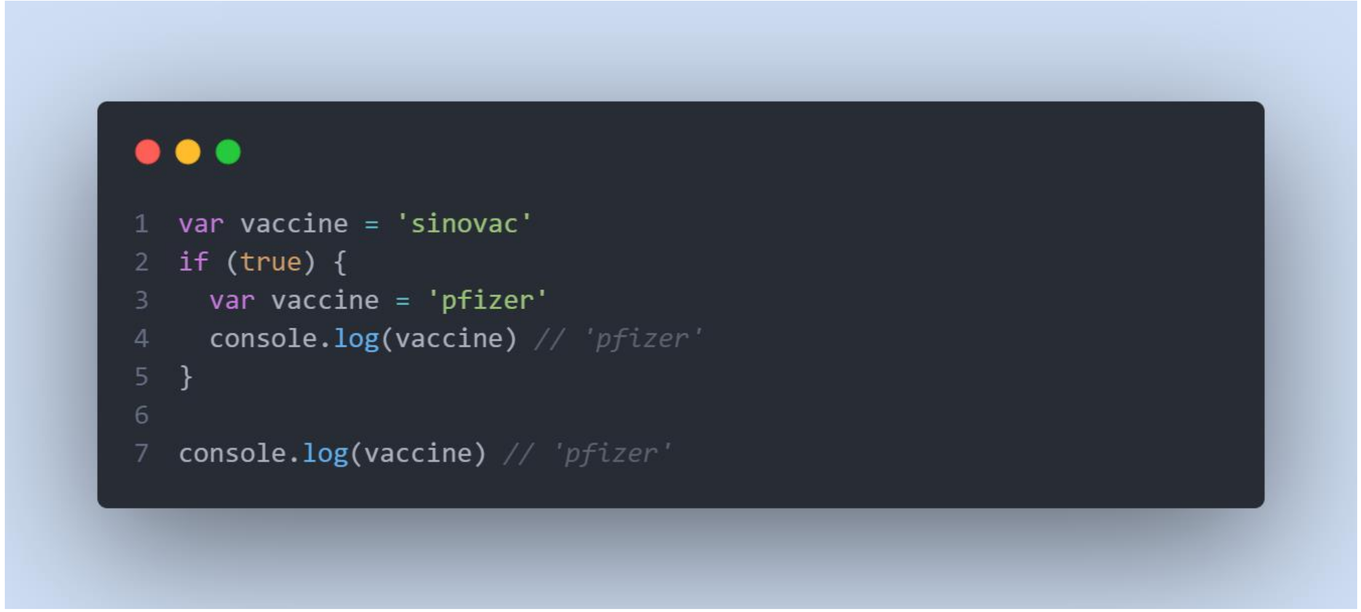
keyword	const	let	var
global scope	NO	NO	YES
function scope	YES	YES	YES
block scope	YES	YES	NO
can be reassigned	NO	YES	YES

รูปจาก www.constletvar.com

```
let let1 = 'let1'
let someDecision = true

if (someDecision) {
  let let2 = "let2"
  var var1 = "var1"

  console.log(let1) // 'let1'
  console.log(let2) // 'let2'
  console.log(var1) // 'var1'
}

console.log(let1) // 'let1'
console.log(let2) // undefine
console.log(var1) // 'var1'
```



```let
let vaccine = 'sinovac'
if (true) {
  let vaccine = 'pfizer'
  console.log(vaccine) // 'pfizer'
}

console.log(vaccine) // 'sinovac'
```



```var
var vaccine = 'sinovac'
if (true) {
  var vaccine = 'pfizer'
  console.log(vaccine) // 'pfizer'
}

console.log(vaccine) // 'pfizer'
```

Don’t use Var?

ใช้ const เสมอเปลี่ยนเป็น let ก็ต่อเมื่อจำเป็นต้องเปลี่ยนค่าตัวแปรนั้นๆ

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Javascript Types

Primitives / Value Types

- String
- Number
- Boolean
- undefined
- null

Reference Types

- Object
- Array
- Function

```
typeof "John"                    // Returns "string"
typeof 3.14                      // Returns "number"
typeof NaN                       // Returns "number"
typeof false                     // Returns "boolean"
typeof [1,2,3,4]                 // Returns "object"
typeof {name:'John', age:34}     // Returns "object"
typeof new Date()                // Returns "object"
typeof function () {}            // Returns "function"
typeof myCar                     // Returns "undefined"
typeof null                      // Returns "object"
```

ตัวแปรใน Javascript เป็น Dynamically-typed

ดังนั้นตอนประกาศใช้งานไม่ต้องระบุ Type

string name = ‘John’ 👉 let name = ‘John’

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Javascript Types Conversion

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วิธีเปลี่ยน Type ใน Javascript มีสองรูปแบบ

Convert by JavaScript Function

Number Methods

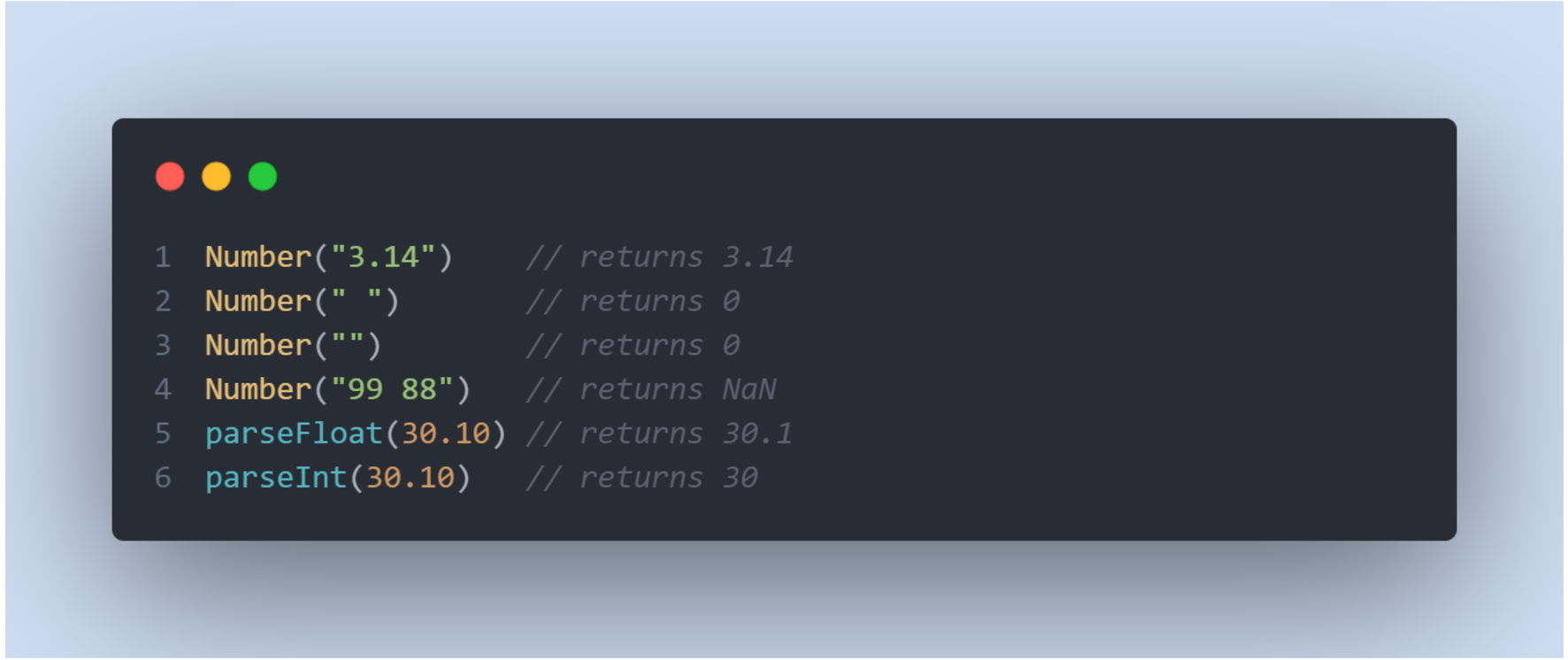
In the chapter Number Methods, you will find more methods that can be used to convert strings to numbers:

Method	Description
Number()	Returns a number, converted from its argument
parseFloat()	Parses a string and returns a floating point number
parseInt()	Parses a string and returns an integer

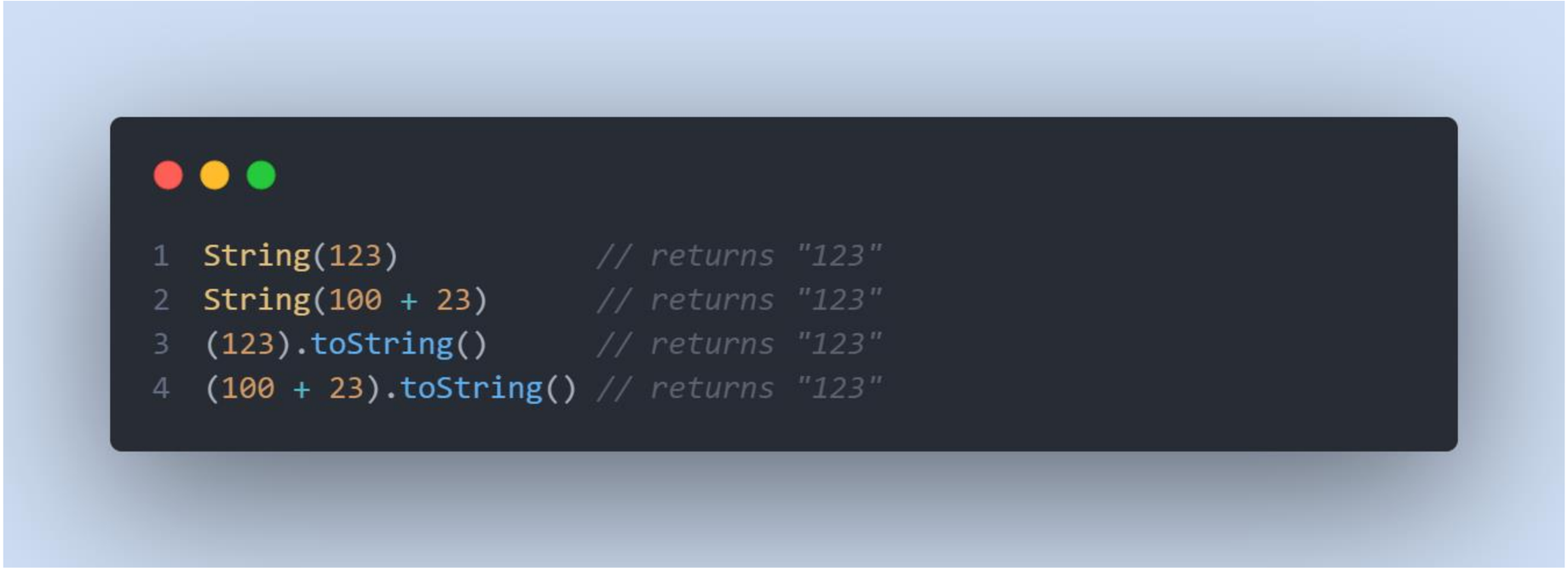
More Methods

In the chapter Number Methods, you will find more methods that can be used to convert numbers to strings:

Method	Description
toExponential()	Returns a string, with a number rounded and written using exponential notation.
toFixed()	Returns a string, with a number rounded and written with a specified number of decimals.
toPrecision()	Returns a string, with a number written with a specified length



```
1  Number("3.14")    // returns 3.14
2  Number(" ")       // returns 0
3  Number("")        // returns 0
4  Number("99 88")   // returns NaN
5  parseFloat(30.10) // returns 30.1
6  parseInt(30.10)   // returns 30
```



```
String(123)           // returns "123"
String(100 + 23)      // returns "123"
(123).toString()      // returns "123"
(100 + 23).toString() // returns "123"
```

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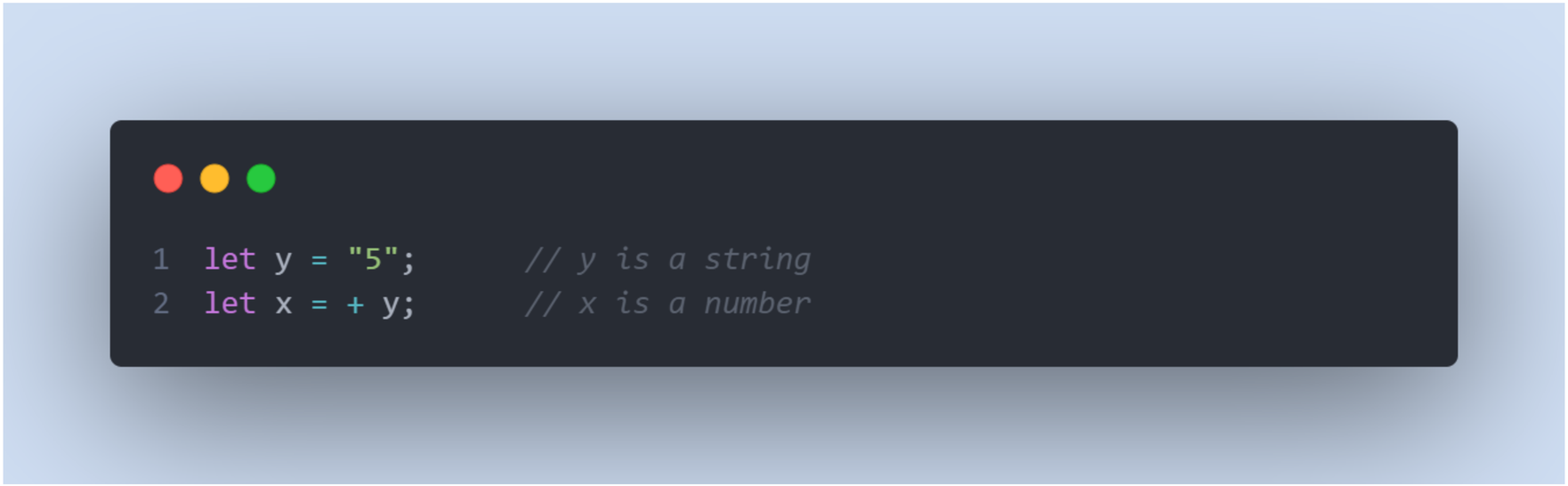
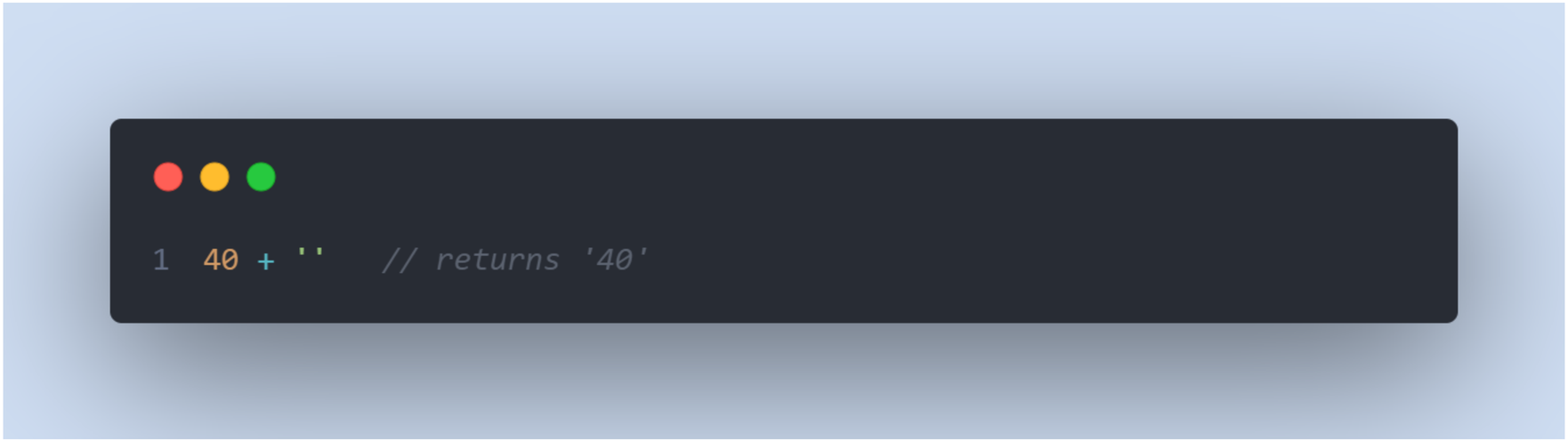
Convert Automatically by JavaScript itself

Unary + Operator




1 40 + '' // returns '40'

```
1  50 + 40          // ??
2  '50' + 40        // ??
3  50 + null        // ??
4  '50' + null      // ??
5  50 + false       // ??
6  50 + 'true'      // ??
7  +''              // ??
```

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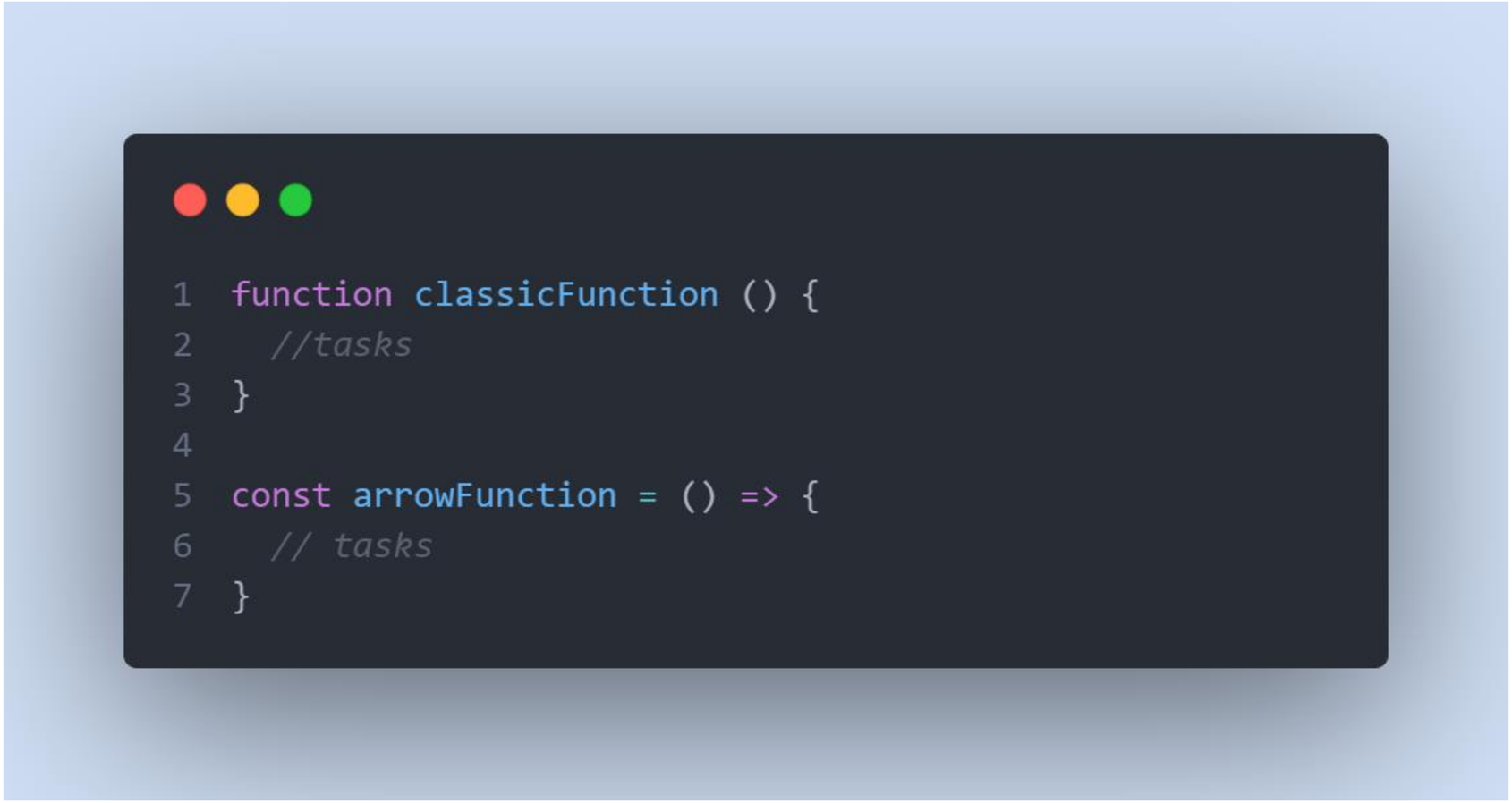
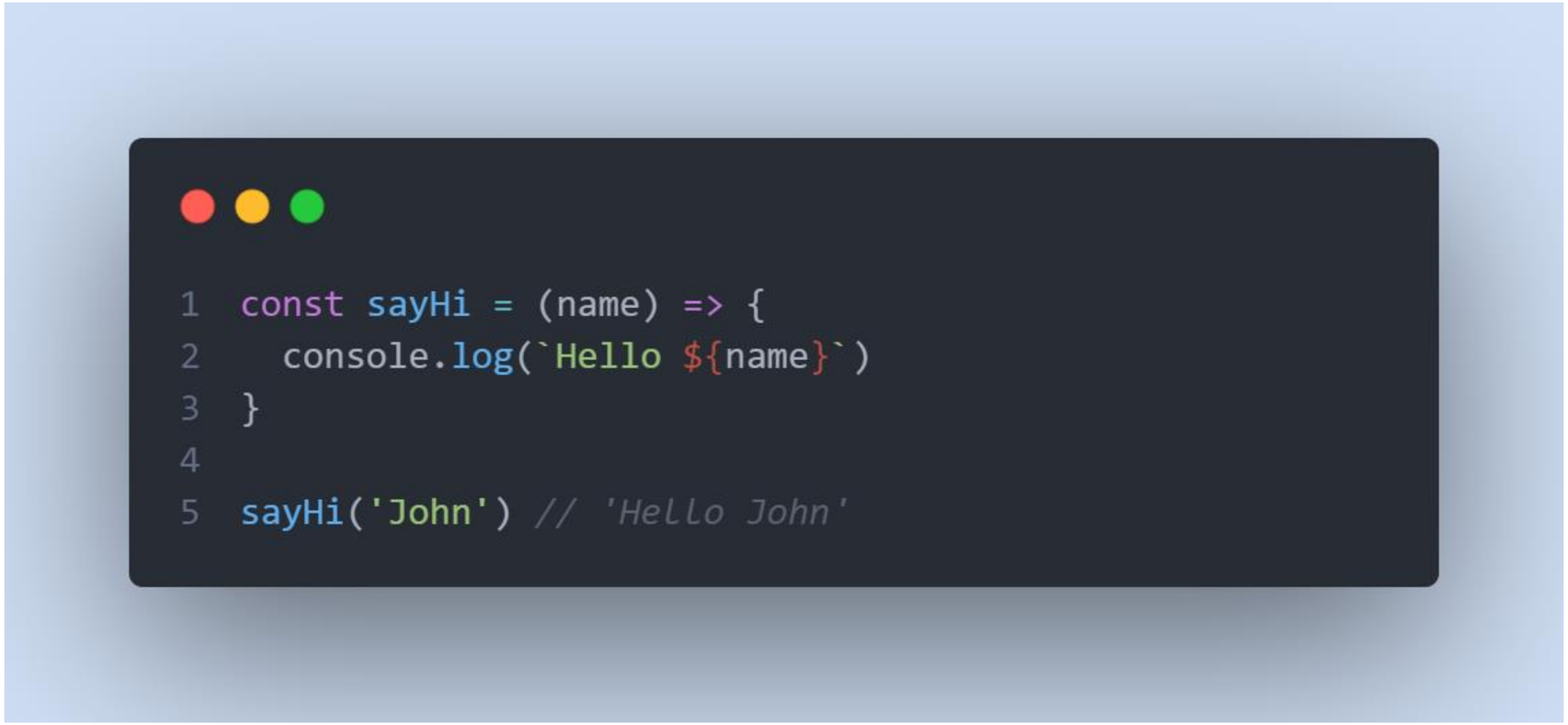
Javascript Functions



```
1  function classicFunction () {
2    //tasks
3  }
4
5  const arrowFunction = () => {
6    // tasks
7  }
```

```
1  const sayHi = () => {
2    console.log('Hello')
3  }
4
5  sayHi() // 'Hello'
```



```
1  const sayHi = (name) => {
2    console.log(`Hello ${name}`)
3  }
4
5  sayHi('John') // 'Hello John'
```

```
// Performing a task
const sayHi = (name) => {
  console.log(`Hello ${name}`)
}

// Calculating a Value
const addition = (number1, number2) => {
  return number1 + number2
}

sayHi('John')   // 'Hello John'
addition(2, 3)  //  5
```

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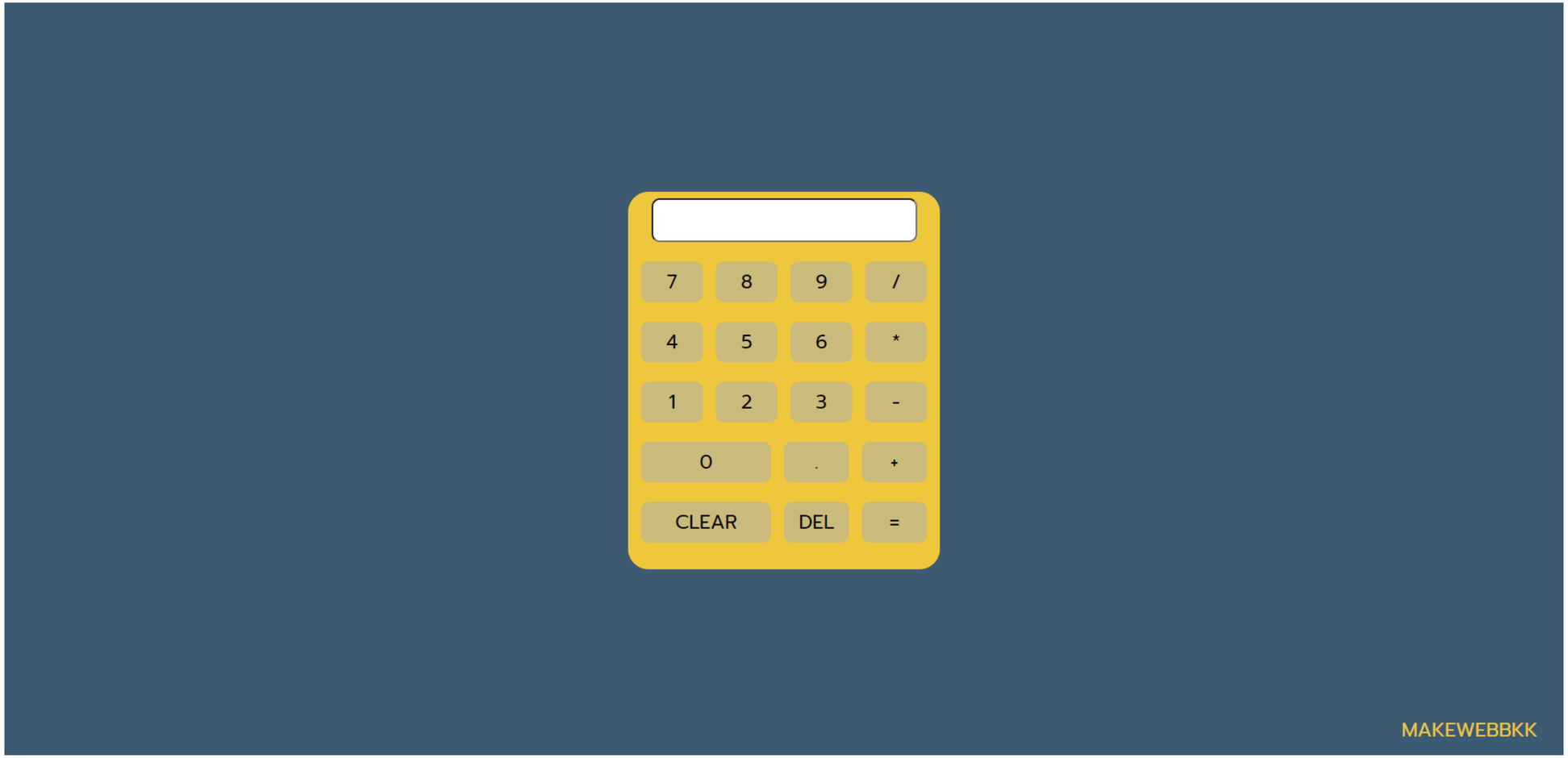
Let’s make a Simple Calculator

Material >> https://github.com/qbullet/simple-calculator-with-no-js (github.com)



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Next, We will see about

Objects, JSON, Strings, String Template and some mini project

SEE YOU SOON ...