极客大学
前端进阶训练营

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前手机淘宝前端负责人

重学前端

JavaScript

JavaScript

- Atom
- Expression
- Statement
- Structure
- Program/Module

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Atom

Grammar

- Literal
- Variable
- Keywords
- Whitespace
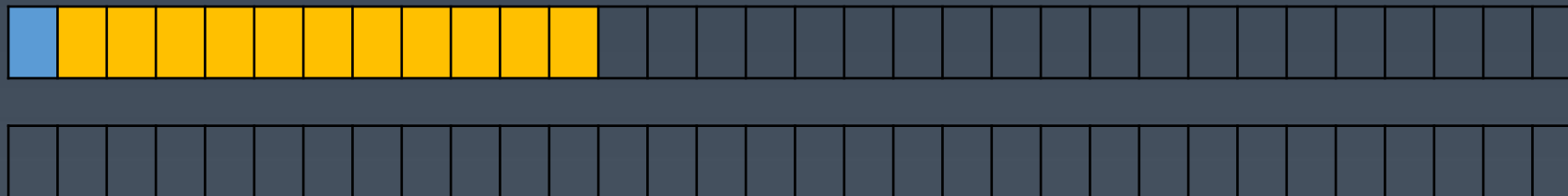- Line Terminator

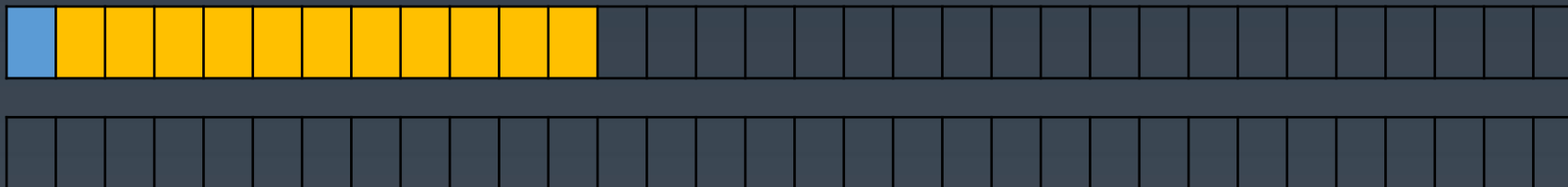## Runtime

- Types
- Execution Context

Types

- Number
- String
- Boolean
- Object
- Null
- Undefined
- Symbol

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Number

- IEEE 754 Double Float
  - Sign（1）
  - Exponent（11）
  - Fraction（52）

实验-Double

Number—Grammar

- *DecimalLiteral*
  - *0*
  - *0.*
  - *.2*
  - *1e3*
- *BinaryIntegerLiteral*
  - *0b111*
- *OctalIntegerLiteral*
  - *0o10*
- *HexIntegerLiteral*
  - *0xFF*

```
0.toString();
0 .toString();
```

Number—Practice

- Safe Integer
- Float Compare

Number.MAX_SAFE_INTEGER.toString(16)
"1fffffffffffff"

Math.abs(0.1 + 0.2 - 0.3) <= Number.EPSILON

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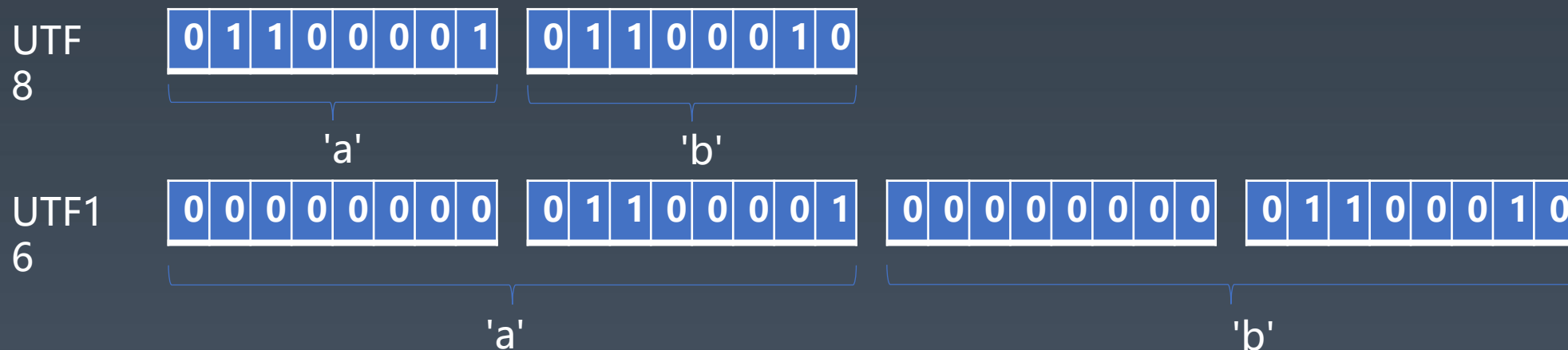# String

- Character
- Code Point
- Encoding

a   97 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |

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String

- ASCII
- Unicode
- UCS
- GB
    - GB2312
    - GBK(GB13000)
    - GB18030
- ISO-8859
- BIG5

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String—Encoding
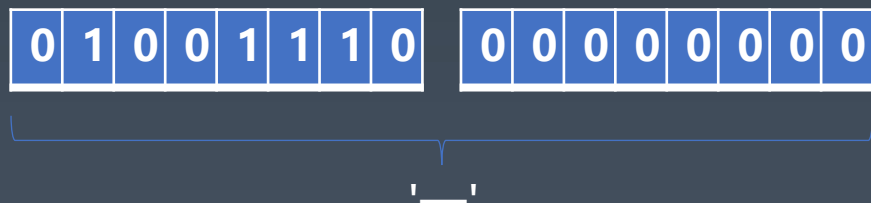
- UTF

String—Encoding

- UTF

UTF
8

| 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

'__'

UTF16

| 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

'__'

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String—Homework

```
function UTF8_Encoding(string){
    //return new Buffer();
}
```

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String—Grammar

"abc"
'abc'
`abc`

String—Grammar Chanllenge

A regular Expression to match string literal.

String—Grammar Answer

"(?:[^"\n\\\r\u2028\u2029]|\\(?:['"\\bfnrtv\n\r\u2028\u2029]|\r\n)|\\x[0-9a-fA-F]{2}|\\u[0-9a-fA-F]{4}|\\[^0-9ux'"\\bfnrtv\n\\\r\u2028\u2029])*"

'(?:[^'\n\\\r\u2028\u2029]|\\(?:['"\\bfnrtv\n\r\u2028\u2029]|\r\n)|\\x[0-9a-fA-F]{2}|\\u[0-9a-fA-F]{4}|\\[^0-9ux'"\\bfnrtv\n\\\r\u2028\u2029])*'

String—Grammar—Template

`abc`

Boolean

- true
- false
- 真的没啥好讲的……

Null & Undefined

- null
- undefined
- void 0;

```
function f(){
    var undefined = 1;
    console.log(undefined);
}


function f(){
    var null = 0;
    console.log(null);
}
```

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THANKS! | G 极客大学