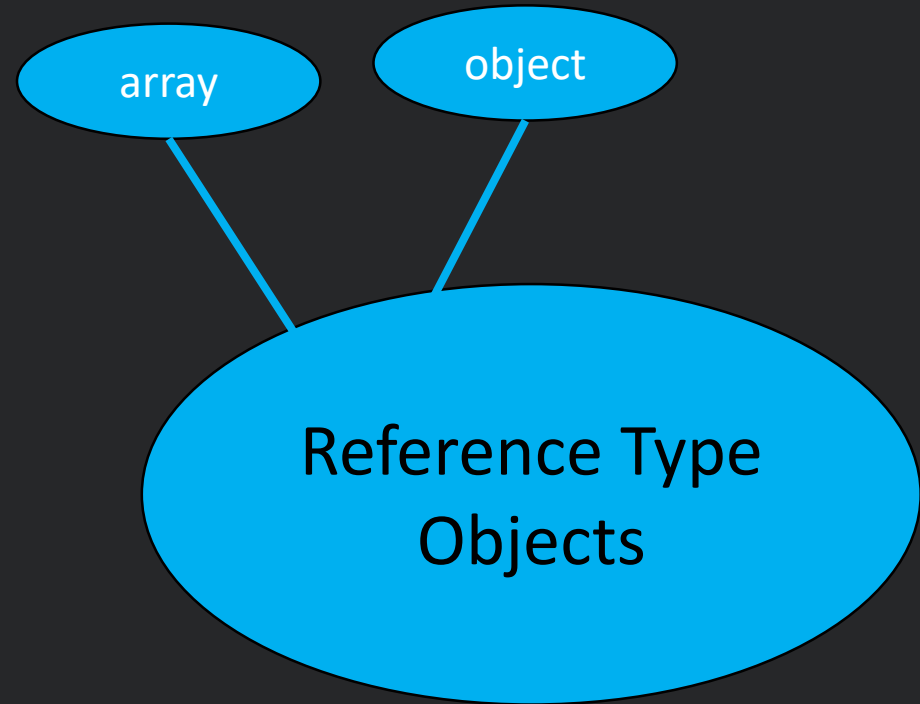
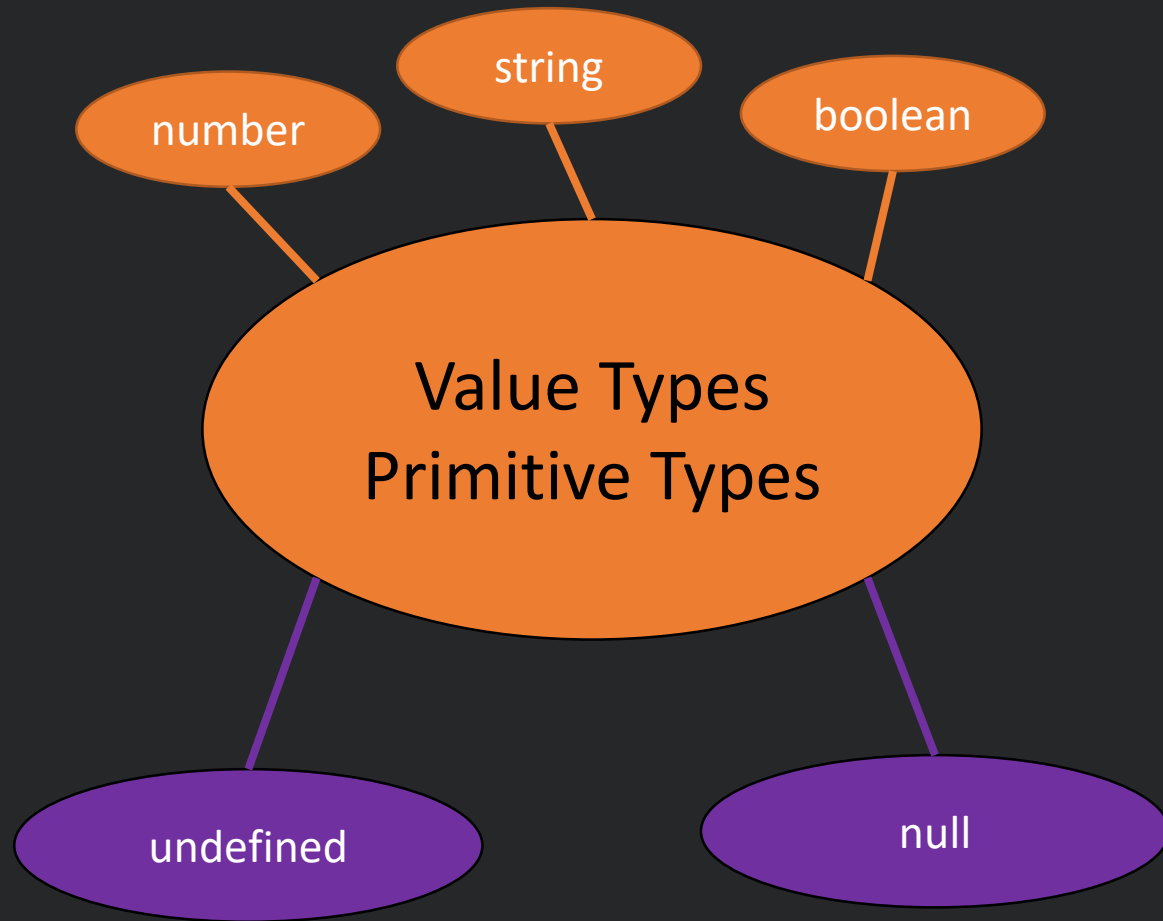


# JavaScript for Developers

## *Data Types*

*(part 4: null & undefined)*

# Data Types



# 1. Null & undefined

- ✓ **undefined**: undefined = “**CHƯA** được định nghĩa / gán”

Nếu bạn không trả lời được câu hỏi giá trị của một **variable / object / property / function** là gì, thì **96%** nó sẽ mang giá trị **undefined**!

**implicitly**

- ✓ **null**: **KHÔNG** chứa gì cả | *trở vào hư không =))*

**PHẢI** có ai đó gán null (cho **object/variable/property**) hoặc trả về null (với **function**) thì nó mới có giá trị **null**.  
*Còn ko thì vẫn là **undefined**!*

**explicitly**

## 2. undefined

- ✓ **undefined** - variables/objects: without init value

```
let x;  
console.log(x); // -> undefined
```

- ✓ **undefined** - function: without return value

```
function sum(a, b) {  
    const c = a + b;  
}  
  
console.log(sum(1, 2)); // -> undefined
```

## 2. undefined

- ✓ **undefined** - function: not passing parameters

```
function print(a, b) {  
    console.log("a = " + a);  
    console.log("b = " + b);  
}
```

```
print(1);  
// a = 1  
// b = undefined
```

## 2. undefined

- ✓ **undefined** – **object**: access to non-exist property



```
const myObj = {  
  name: "Jim",  
};
```

```
console.log(myObj.age); // -> undefined
```

- ✓ **undefined**: with **void** operator:

```
void 0
```

# 3. null

- ✓ explicitly
- ✓ null: it is primitive value but type of null is object

```
console.log(typeof null); // -> object
```

## 4. Check null and undefined

- ✓ If you try to **access** properties/methods from an **undefined** or **null** => **ERROR**

```
if (x)
```



**NOTE\_1:** empty string, 0, NaN, false

```
if (x == undefined)
```

**NOTE\_2:** undefined is not a keyword

```
if (x == void 0)
```

**NOTE\_3:** CAN NOT distinguish between null and undefined.

```
if (x == null)
```

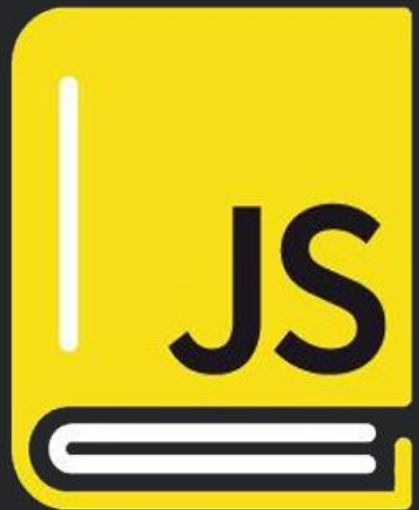
```
if (typeof x == "undefined")
```

**NOTE\_4:** only for undefined.



# Refs

- <https://developer.mozilla.org/en-US/docs/Glossary/undefined>
- [https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/undefined](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/undefined)
- [https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)
- <https://262.ecma-international.org/5.1/#sec-9.2>



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