JavaScript Data Types Demystified

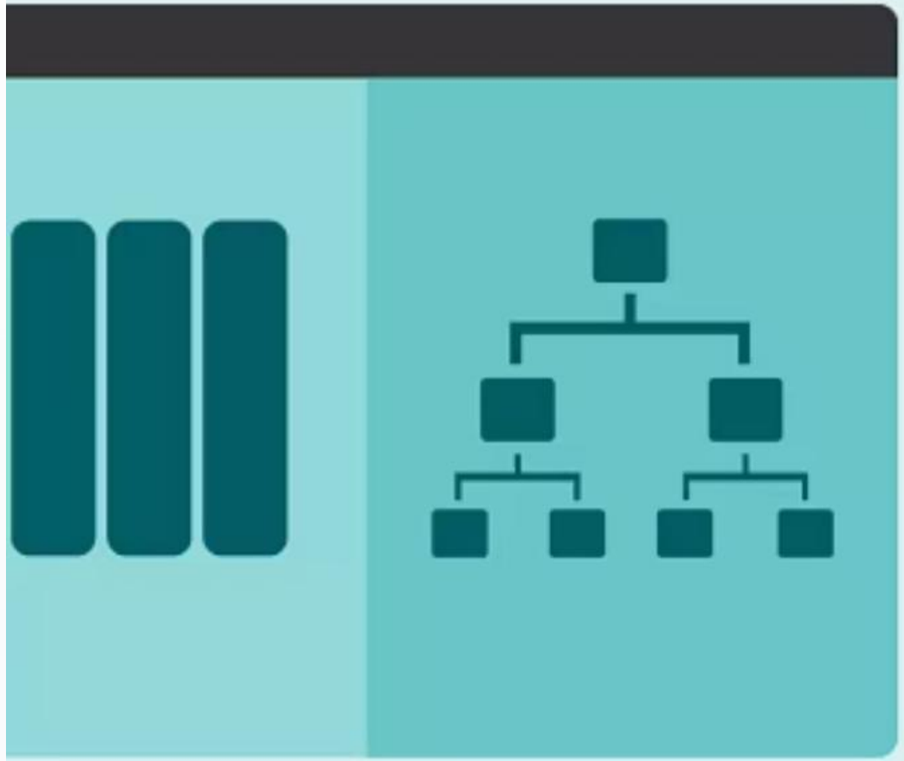
- *"JavaScript Data Types Explained ⚡ "*
- *"Learn the Core with study in short!"*

Agenda

1. Primitive vs. Non-Primitive Types
2. The 7 Primitive Data Types
3. `typeof` Operator
4. Key Differences & Examples
5. Interview Tips

Primitive vs. Non-Primitive

- **Primitive:** Stored by value (immutable)
  - `number`, `string`, `boolean`, `null`, `undefined`, `symbol`, `bigint`
- **Non-Primitive:** Stored by reference (mutable)
  - `object`, `array`, `function`



Number & String

- Number:

```
let age = 25;
let price = 9.99;
```

- String:

```
let name = "Alice";
let msg = `Hello ${name}!`; // Template literal
```

Boolean, Null, Undefined

- **Boolean:** `true` or `false`
- **Null:** Intentional empty value

```
let empty = null;
```

- **Undefined:** Default uninitialized value

```
let x; // undefined
```

Symbol & BigInt

- **Symbol:** Unique identifier

```
let id = Symbol("id");
```

- **BigInt:** Large integers (suffix `n`)

```
let big = 123456789012345678901n;
```

`typeof` Operator

```
console.log(typeof 42); // "number"
console.log(typeof "JS"); // "string"
console.log(typeof null); // "object" (Watch out!)
```

Key Differences (Table)

Type	Mutable?	Example
`number`	No	`42`
`string`	No	`"hello"`
`boolean`	No	`true`
`null`	No	`null`
`symbol`	No	`Symbol('id')`

Pro Tips for Interviews

1. Always use `===` over `==` (avoids type coercion)
2. `null` vs. `undefined` – know the difference!
3. `NaN` is a special "number" (use `isNaN()` to check)

Quiz Time!

```
let a = 10;
let b = "10";
console.log(a == b);  // What's the output?
```

Resources

- Free eBook: "JavaScript Quick Reference"

W3Schools.com

https://www.geeksforgeeks.org/javascript/

- Follow for daily JS tips
- GitHub repo with code examples