🔥 JavaScript Day 6 Notes – Data Types

🎯 1. Primitive Data Types (Call by Value)

Primitive types are simple values stored directly in memory. There are **7** primitive data types in JavaScript:

1. **String** → Represents text (e.g., "Hello")
2. **Number** → Represents numbers (e.g., 42, 3.14)
3. **Boolean** → true or false (e.g., isLoggedIn = false)
4. **null** → Represents **empty** or **unknown** value
5. **undefined** → A variable declared but **not assigned** any value
6. **Symbol** → Used for **unique identifiers** (mostly in React & advanced JS)
7. **BigInt** → Used for large numbers beyond Number limit

✅ Example:

let name = "Pranay"; // String

let age = 21; // Number

let isLoggedIn = false; // Boolean

let score = null; // Null

let value; // Undefined

let uniqueId = Symbol("id"); // Symbol

let bigNumber = BigInt(12345678901234567890); // BigInt

🔥 2. Is JavaScript Statically or Dynamically Typed? 🤔

✅ JavaScript is Dynamically Typed!

- This means we **don't need to declare types** (like int, string, etc.) before using variables.
- JavaScript automatically determines the type at **runtime**.

let data = "Hello"; // Initially a string

data = 10; // Now a number ✅ Allowed in JS!

🎯 3. Non-Primitive Data Types (Reference Types)

Unlike primitives, non-primitive types **store references** to the memory where the actual data is kept.

1. **Arrays** → Ordered list of values

2. **Objects** → Key-value pairs
3. **Functions** → Blocks of reusable code

✅ **Example:**

```
let fruits = ["Apple", "Mango", "Banana"]; // Array


let user = {
  name: "Pranay",
  age: 21
}; // Object


function greet() {
  console.log("Hello!");
} // Function
```
