Block.md 2025-04-27

Understanding Scope with var, let, and const

```
var a = 10;
 let b = 20;
 const c = 30;
console.log(a); // ✓ 10
console.log(b); // X Uncaught ReferenceError: b is not defined
console.log(c); // X Uncaught ReferenceError: c is not defined
```

What's Happening?

Keyword	Behavior Inside Block {}	Behavior Outside Block {}
var a	Declared globally (function/global scoped)	Accessible (prints 10)
let b	Block scoped 🚧	Not accessible X (ReferenceError)
const c	Block scoped 🚧	Not accessible X (ReferenceError)

Key Points:

- var is **function scoped** or **globally scoped**. It does NOT care about blocks {} that's why a is accessible outside the block.
- let and const are block scoped. They exist only within the {} block where they are defined. Trying to access them outside results in a ReferenceError.

Quick Analogy:

- Think of var like a **free bird** \mathfrak{C} it flies over block boundaries.
- Think of let and const like goldfish in a tank 1 they stay confined inside the block they were created in!