

Master JavaScript Variables: var, let, const

Code with Confidence, Declare with Clarity!



Agenda

1. What are Variables? (Brief intro)
2. `var`, `let`, `const` – Key Facts
3. Scope & Usability (Comparison Table)
4. Interview Pro Tips
5. Best Practices
6. Q&A + Practice Challenge
7. Quiz Time

What are Variables?

- Definition: Containers to store data.
- Example:

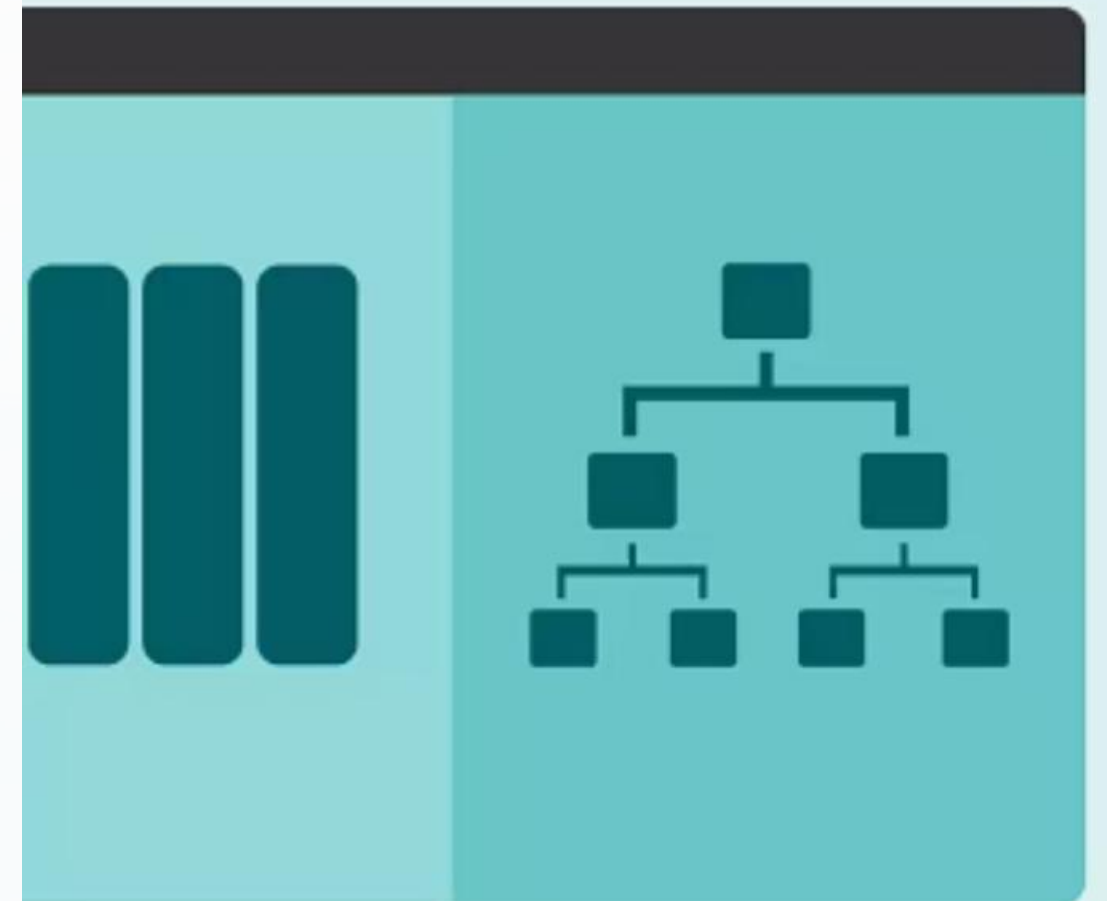
```
let name = "Alice"; // Variable holds a value
```



var – Key Facts

- Old-school (ES5).
- Function-scoped (Not block-scoped).
- Hoisted (Can be used before declaration).
- Re-declarable:

```
var x = 10;  
var x = 20; // Works!
```



let – Key Facts

- Modern (ES6).
- Block-scoped ({ } matters).
- Not re-declarable (but updatable):

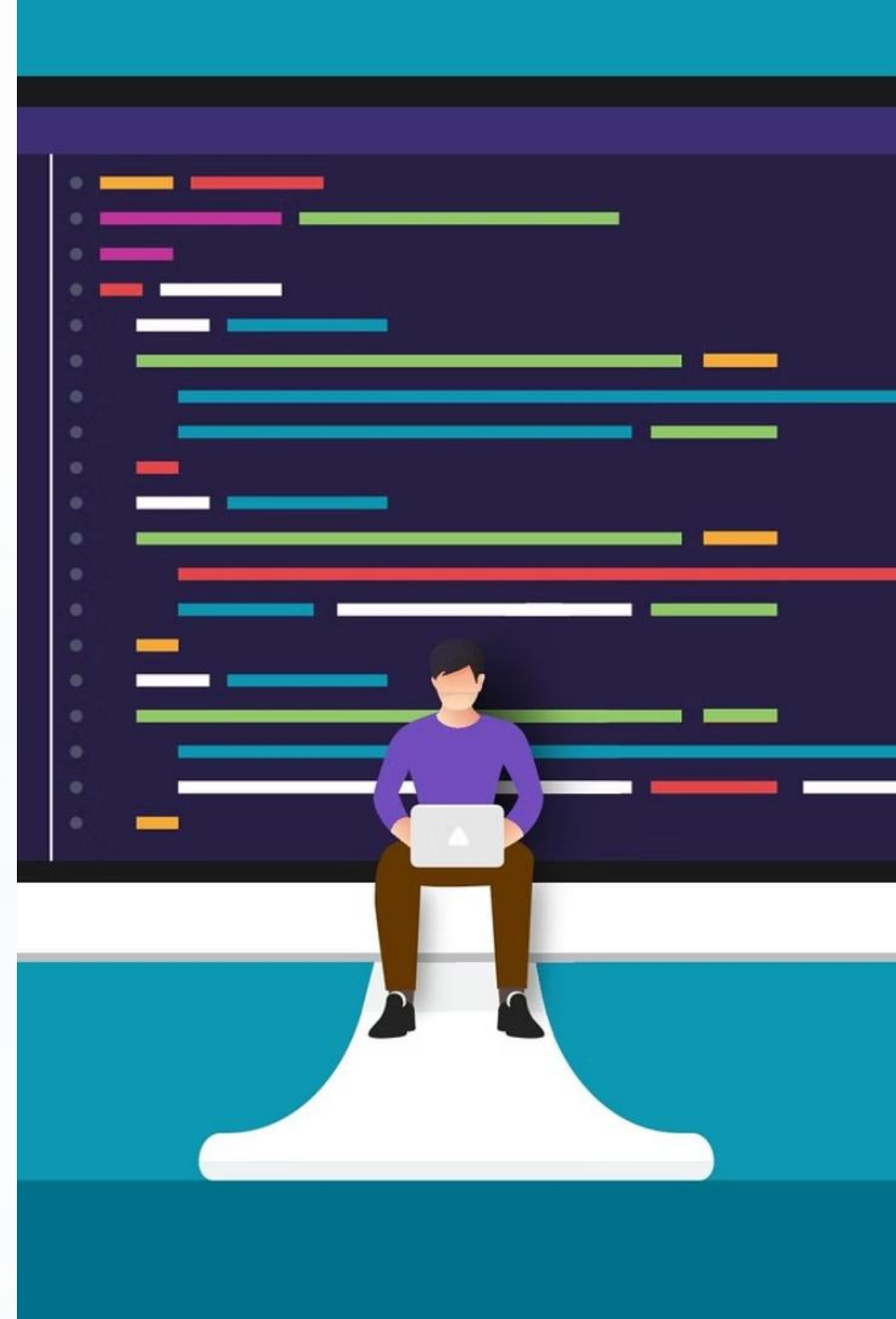
```
let y = 10;  
y = 20; // OK!  
let y = 30; // Error!
```



const – Key Facts

- Constant (Cannot reassign).
- Block-scoped.
- Must initialize during declaration:

```
const z = 100;  
z = 200; // Error!
```



Scope & Usability Comparison

Feature	var	let	const
Scope	Function	Block	Block
Reassign	Yes	Yes	No
Redeclare	Yes	No	No
Hoisting	Yes (undefined)	No (TDZ)	No (TDZ)

Interview Pro Tips

1. Always prefer `const` > `let` > `var`.
2. Explain Temporal Dead Zone (TDZ) for `let/const`.
3. Mention `var` hoisting quirks.
4. Use cases:
 - `const`: For constants (PI, API keys).
 - `let`: Loop counters, dynamic values.

Best Practices to Stand Out

- ✓ Avoid `var` (legacy code only).
- ✓ Use `const` by default, `let` if rebinding needed.
- ✓ Name variables clearly (e.g., `userAge` not `x`).
- ✓ Minimize global variables.

Q&A + Practice Challenge

Question:

```
for (var i = 0; i < 3; i++) {  
  setTimeout(() => console.log(i), 1000); // Output?  
}
```

Quiz Time

1. Which is block-scoped? `var` or `let`?
2. Can `const` variables be updated?
3. What's the output?

```
console.log(a);  
let a = 5;
```

Resources

- Free eBook: "JavaScript Quick Reference"

[W3Schools.com](https://www.w3schools.com/)

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

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

Thank You!

Call-to-Action:

"Practice now! Open DevTools and experiment."