JavaScript Quick Review

Introduction to JavaScript

JavaScript is a programming language used to make websites interactive. It runs in the browser and on servers using Node.js.

Variables

```
var - function-scoped, can be redeclared.
let - block-scoped, cannot be redeclared.
const - block-scoped, cannot be updated or redeclared.
Using nothing - becomes global (not recommended).
```

JS Display

```
console.log() - logs to browser console.
document.write() - writes to webpage.
window.alert() - shows popup alert.
```

Data Types

Primitive: Number, String, Boolean, Null, Undefined

Non-Primitive: Object, Array, Function

Operators

```
Assignment: =
Arithmetic: + - * / % ++ -- **
Comparison: == === != !== > < >= <=
Logical: && || !
```

If Else

```
if (condition) { ... } else { ... }
```

typeof Operator

Returns data type: typeof 'hello' -> 'string'

Coercion / Type Conversion

```
'5' + 1 -> '51'
Number('5') + 1 -> 6
```

Switch Case

```
switch(expression) { case x: break; default: }
```

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Ternary Operator

condition ? expr1 : expr2

Loops

For: for (let i=0; i<5; i++) While: while (condition)

Do While: do { } while (condition)

Functions

```
function greet(name) { return 'Hello ' + name; }
Arrow: const greet = name => 'Hello ' + name;
```

Objects

let person = { name: 'Alice', age: 25 };

For In Loop

Iterates over object keys.

For Of Loop

Iterates over array values.

String Methods

length, toUpperCase(), toLowerCase(), trim(), slice(), substring(), replace(), split(), repeat()

String Search Methods

includes(), indexOf(), startsWith(), endsWith()

Template Literals

let name = 'Sam'; let message = `Hello, \${name}`;