Understanding Truthy and Falsy Values in JavaScript

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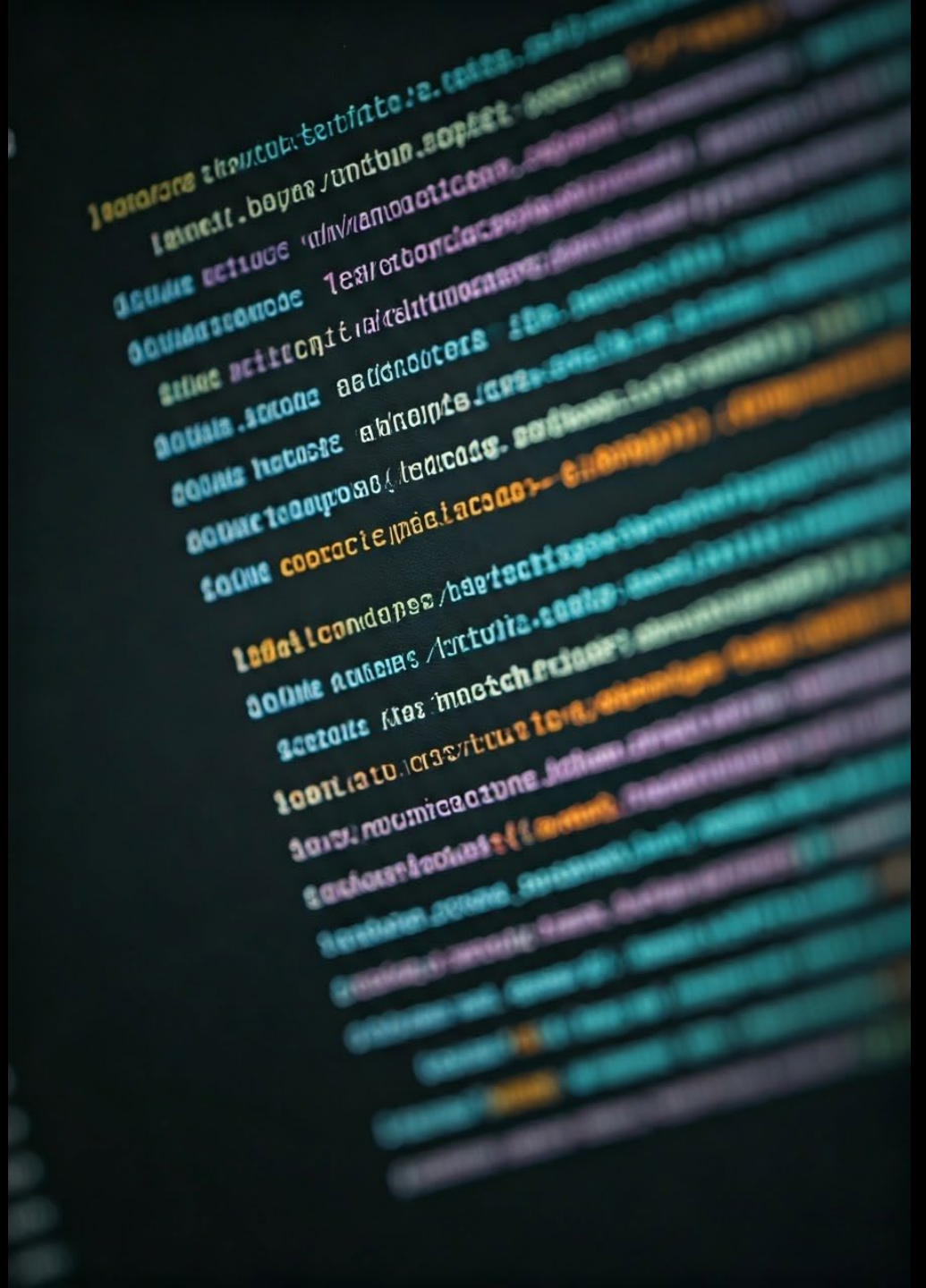
Introduction

In JavaScript, truthy and falsy values are concepts related to boolean evaluation. Every value in JavaScript has an inherent boolean "truthiness" or "falsiness," which means they can be implicitly evaluated to true or false in boolean contexts, such as in conditional statements or logical operations.



What Are Truthy Values?

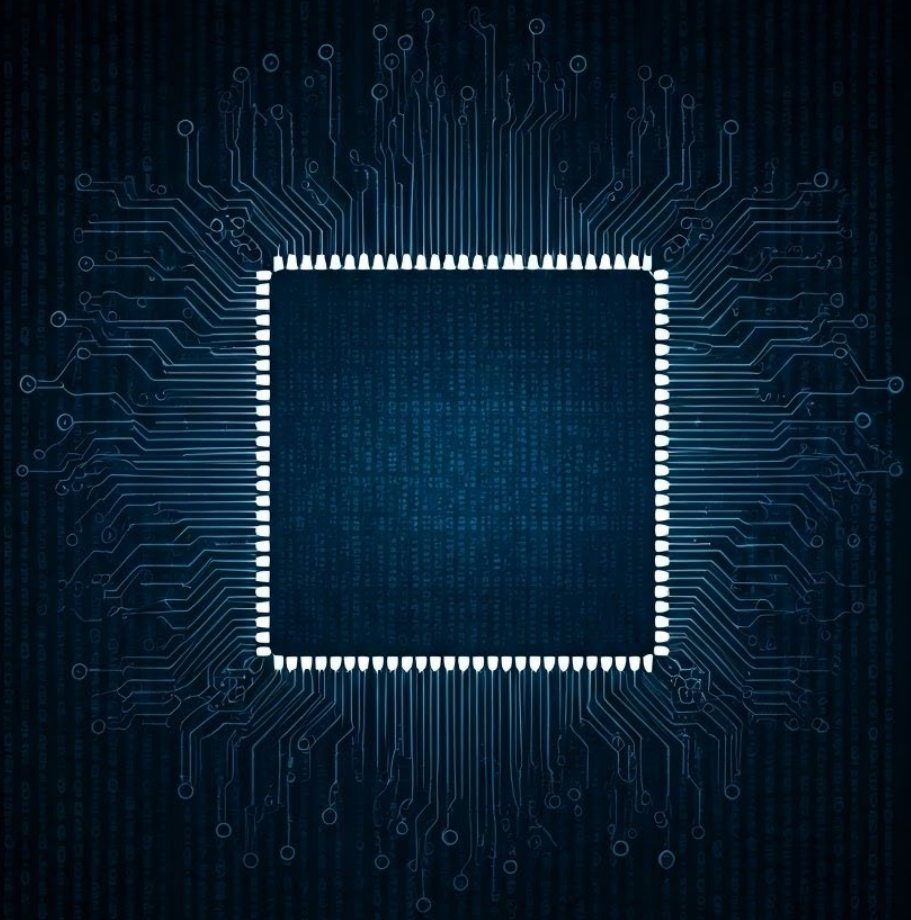
Truthy values are values that are evaluated to be true when used in a Boolean context. Simply put, any value that is not explicitly falsy is considered truthy.

These are some truthy values

- Non-zero numbers: 42, -1, 3.14
- Non-empty strings: "hello", "0", " "
- Objects and arrays: {}, []
- Functions: function() {} 10n
- Dates: new Date()
- Symbols: Symbol()
- BigInt values other than 0n: 10n

What Are Falsy Values?

Falsy values are values that evaluate to false when used in a Boolean. JavaScript has a fixed list of falsy values.



These are some Falsy values

- false
- 0 (and -0)
- 0n (BigInt zero)
- "" (empty string)
- null
- undefined
- NaN
- document. all (used for backward compatibility)

Difference Between Truthy and Falsy Values

Aspect	Truthy Values	Falsy Values
Definition	Values that evaluate to true in Boolean contexts.	Values that evaluate to false in Boolean contexts.
Examples	42, "hello", {}, [], function() {}	false, 0, -0, "", null, undefined, NaN
Empty Structures	Empty objects {} and arrays [] are truthy.	Not applicable (empty structures are not falsy).
Strings	Non-empty strings (e.g., "hello", " ") are truthy.	Empty strings ("") are falsy.
Numbers	Non-zero numbers (e.g., 42, -3.14) are truthy.	Zero (0, -0) is falsy.
BigInt	Any non-zero BigInt value (e.g., 10n) is truthy.	Zero BigInt (0n) is falsy.
Usage in Logical Operators	Can short-circuit `	

Conclusion

The concept of truthy and falsy values is important for writing concise and readable code, as it allows you to check for the existence or validity of a value without explicitly comparing it to true or false.