OPERATORS IN JAVASCRIPT: AN INTRODUCTION

JavaScript uses various operators to perform operations on values and variables, such as arithmetic, comparisons, and logic combinations.
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Operators are categorized based on their function.

Here are the primary types of operators in JavaScript:

Arithmetic Operators:
These operators perform standard mathematical calculations.

- + (Addition): Adds two numbers
- - (Subtraction): Subtracts one number from another
- * (Multiplication): Multiplies two numbers
- / (Division): Divides one number by another
- % (Modulus): Returns the remainder of a division
- ** (Exponentiation): Raises the first operand to the power of the second
- ++ (Increment): Increases a variable's value by one
- -- (Decrement): Decreases a variable's value by one

Assignment Operators:
These operators assign values to variables, often performing an operation at the same time.

- = (Assignment): Assigns the value on the right to the variable on the left
- += (Addition assignment): Adds a value to a variable
- -= (Subtraction assignment): Subtracts a value
- *= (Multiplication assignment): Multiplies a value
- /= (Division assignment): Divides by a value
- %= (Modulus assignment): Assigns the remainder

Comparison Operators:
These operators compare two values and return a Boolean value (true or false).

- == (Equal to): Checks if values are equal (value only)
- === (Strict equal): Checks if values and types are equal
- != (Not equal): Checks if values are not equal (value only).
- !== (Strict not equal): Checks if values and types are not equal.
- > (Greater than)
- < (Less than)
- >= (Greater than or equal to)
- <= (Less than or equal to)

Logical Operators:
These are used to combine multiple conditions or reverse a boolean value.

- && (Logical AND): true only if both operands are true.
- || (Logical OR): true if at least one operand is true.
- ! (Logical NOT): Reverses the boolean result.

Other Notable Operators:

Ternary (Conditional) Operator: A shorthand for an if statement.
   Syntax: condition ? expressionIfTrue : expressionIfFalse.

typeof Operator: Returns the data type of a variable or value.

String Operator: The + operator can also be used to concatenate strings
   (e.g., "Hello" + " World").

Bitwise Operators: Used to perform binary operations on integer numbers.