JavaScript Operators

Anthoniraj Amalanathan

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The basic operators in JavaScript allow you to perform operations on variables and values.

- Arithmetic Operators
- Assignment Operators
- Comparison Operators
- Logical Operators
- Unary Operators

1. Arithmetic Operators

- ○ `+` Addition
- ○ `-` Subtraction
- ○ `*` Multiplication
- ○ `/` Division
- ○ `%` Modulus (remainder of division)

Example:

```
let result = 10 + 5; // Addition
let difference = 10 - 5; // Subtraction
let product = 10 * 5; // Multiplication
let quotient = 10 / 5; // Division
let remainder = 10 % 3; // Modulus (remainder of 10 divided by 3)
```

2. **Assignment Operators**

- `=` Assigns a value to a variable

- `+=` Adds a value to a variable and assigns the result

- `-=` Subtracts a value from a variable and assigns the result

- `*=` Multiplies a variable by a value and assigns the result

- `/=` Divides a variable by a value and assigns the result

Example:

```
let x = 5; // Assignment
x += 3; // x is now 8 (add 3 to x)
x -= 2; // x is now 6 (subtract 2 from x)
x *= 4; // x is now 24 (multiply x by 4)
x /= 3; // x is now 8 (divide x by 3)
```

3. **Comparison Operators**

- `==` Equal to

- `!=` Not equal to

- `>` Greater than

- `<` Less than

- `>=` Greater than or equal to

- `<=` Less than or equal to

Example:

```javascript
let a = 5;  let b = 10;
console.log(a == b); // Outputs: false
console.log(a != b); // Outputs: true
console.log(a > b); // Outputs: false
console.log(a < b); // Outputs: true
console.log(a >= b); // Outputs: false
console.log(a <= b); // Outputs: true
```

4. **Logical Operators**

- ○ `&&` Logical AND
- ○ `||` Logical OR
- ○ `!` Logical NOT

Example:

```javascript
let x = 5;
let y = 10;
console.log(x < 10 && y > 5); // Outputs: true (both conditions are true)
console.log(x < 10 || y < 5); // Outputs: true (at least one condition is true)
console.log(!(x < 10)); // Outputs: false (negates the result of the condition)
```

5. **Unary Operators**

- `++` Increment
- `--` Decrement

Example:

```javascript
let count = 5;
count++; // Increment count by 1
console.log(count); // Outputs: 6
count--; // Decrement count by 1
console.log(count); // Outputs: 5
```