Logical Operators

Logical operators are used to determine the logic between variables or values.

Logical operators are typically used with Boolean (logical) values; when they are, they return a Boolean value. However, the && and || operators actually return the value of one of the specified operands, so if these operators are used with non-Boolean values, they may return a non-Boolean value.

We have three logical operators in js:

- && : logical AND
  The **&&** operator evaluates to **true** if both operands are **true**, otherwise it evaluates to **false**. For example, **true && true** evaluates to **true**, while **true && false** and **false && false** both evaluate to **false**.

- || : Logical OR
  The **||** operator evaluates to **true** if at least one operand is **true**, otherwise it evaluates to **false**. For example, **true || true** and **true || false** both evaluate to **true**, while **false || false** evaluates to **false**.

- ! : Logical NOT
  The **!** operator is a unary operator that negates its operand. It returns **true** if its operand is **false**, and **false** if its operand is **true**. For example, **!true** evaluates to **false**, while **!false** evaluates to **true**.

Example:

```
let a = 5;
let b = 10;

// Logical AND
console.log(a < 10 && b > 5); // true
console.log(a > 10 && b > 5); // false

// Logical OR
console.log(a < 10 || b > 5); // true
console.log(a > 10 || b > 5); // true
console.log(a > 10 || b < 5); // false

// Logical NOT
console.log(!(a < 10)); // false
console.log(!(a > 10)); // true
```