

# PROSENSIA PVT LTD

## M FAROOQ

## JS OPERATOR

### Introduction

JavaScript provides a powerful set of **operators** and **conditional statements** that allow developers to perform operations, compare values, and make decisions during code execution. These form the backbone of logic control in web development.

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## 1. JavaScript Operators

Operators are special symbols used to perform operations on operands. JavaScript supports the following categories of operators:

### Arithmetic Operators

Used for mathematical calculations.

```
js
CopyEdit
+ // Addition
- // Subtraction
* // Multiplication/ // Division
% // Modulus (Remainder)
** // Exponentiation
js
CopyEdit
let x = 5;let y = 2;console.log(x + y); // 7
```

### Assignment Operators

Assign values to variables.

```
js
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= // Assign
+= // Add and assign
-= // Subtract and assign
*= // Multiply and assign
```

## Comparison Operators

Used to compare two values and return a boolean.

```
js
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==  // Equal (type conversion)
=== // Equal (strict)
!=  // Not equal
>   // Greater than
<   // Less than
>=  // Greater than or equal
<=  // Less than or equal

js
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let a = 10; console.log(a == "10"); // true (type
coercion) console.log(a === "10"); // false (strict comparison)
```

## Logical Operators

Used to combine or invert boolean values.

```
js
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&& // AND
||  // OR
!   // NOT
```

## Other Common Operators

**typeof** – Returns the type of a variable.

**? :** – Ternary operator for inline conditionals.

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## 2. Conditional Statements

Conditional statements control the **flow of execution** based on given conditions.

### if Statement

Executes a block if the condition is true.

```
js
CopyEdit
```

```
if (score > 50) {  
  console.log("Passed");  
}
```

### **if...else Statement**

Executes one block if true, another if false.

```
js  
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if (score >= 60) {  
  console.log("Pass");  
} else {  
  console.log("Fail");  
}
```

### **else if Ladder**

Used to test multiple conditions.

```
js  
CopyEdit  
if (marks >= 90) {  
  console.log("A Grade");  
} else if (marks >= 75) {  
  console.log("B Grade");  
} else {  
  console.log("Needs Improvement");  
}
```

### **switch Statement**

Checks multiple cases for a single variable/value.

```
js  
CopyEdit  
let day = "Monday";  
switch (day) {  
  case "Monday":  
    console.log("Start of the week");  
    break;  
  case "Friday":  
    console.log("Weekend is near!");  
    break;  
  default:
```

```
    console.log("Midweek day");  
}
```

Use if-else for range checks and complex conditions.  
Use switch for exact value matches.