

# Pr@Sensia

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## **Operators & Conditional Statements (if, else, switch)**

### **Objective**

To understand:

- Different types of **JavaScript operators** used in expressions
- Use of **conditional statements** like if, else if, else, and switch for decision-making in programs

### **JavaScript Operators**

JavaScript provides various operators to perform operations on variables and values.

Types of Operators

<b>Operator Type</b>	<b>Description</b>	<b>Example</b>
Arithmetic Operators	Perform mathematical calculations	+, -, *, /, %, **
Assignment Operators	Assign values to variables	=, +=, -=
Comparison Operators	Compare two values	==, ===, !=, <, >

Operator Type	Description	Example
Logical Operators	Combine multiple conditions	&&, `
Unary Operators	Operate on a single operand	typeof, ++, --
Ternary Operator	Short-hand for if-else	condition ? val1 : val2

### Arithmetic Example:

```
let a = 10, b = 5;
console.log(a + b); // 15
console.log(a ** 2); // 100
```

### Comparison & Logical Example:

```
let age = 20;
console.log(age > 18);    // true
console.log(age === "20"); // false (strict equality)
console.log(age >= 18 && age < 25); // true
```

### Conditional Statements

Conditional statements help make decisions based on conditions.

#### 1. if...else

```
let score = 85;
if (score >= 90) {
  console.log("Grade A");
} else if (score >= 75) {
  console.log("Grade B");
} else {
  console.log("Grade C");
}
```

#### 2. switch

Used for multiple fixed options, cleaner than multiple if...else blocks.

```
let day = 3;
switch (day) {
  case 1:
    console.log("Monday");
    break;
  case 2:
    console.log("Tuesday");
    break;
  case 3:
    console.log("Wednesday");
    break;
  default:
    console.log("Other day");
}
```

#### Ternary Operator

```
let isLoggedIn = true;
let message = isLoggedIn ? "Welcome!" : "Please login";
console.log(message);
```

#### Conclusion (Day 3)

Operators and conditional statements are the **building blocks of logic in programming**. I learned how to evaluate expressions and control the flow of execution using if, else, and switch statements efficiently.