/* Suppose you're building a calculator application in JavaScript. How would you utilize differenttypes of operators (arithmetic, assignment, comparison, logical) to implement basic arithmeticoperations and ensure accurate calculation results? */

Building a calculator application in JavaScript ES6 involves handling different types of operators to perform basic arithmetic operations.

1. **Arithmetic Operators**:
   - These operators perform mathematical calculations.
   - Examples:
     - **Addition (+)**: Combine two numbers.
     - **Subtraction (-)**: Subtract one number from another.
     - **Multiplication (*)**: Multiply two numbers.
     - **Division (/)**: Divide one number by another.
     - **Modulus (%)**: Get the remainder after division.

2. **Assignment Operators**:
   - These operators assign values to variables.
   - Examples:
     - **Assignment (=)**: Assign a value to a variable.
     - **Addition Assignment (+=)**: Add and assign.
     - **Subtraction Assignment (-=)**: Subtract and assign.
     - **Multiplication Assignment (*=)**: Multiply and assign.
     - **Division Assignment (/=)**: Divide and assign.

3. **Comparison Operators**:
   - These operators compare values and return a Boolean result (true or false).
   - Examples:
     - **Equal (== or ===)**: Check if two values are equal.
     - **Not Equal (!= or !==)**: Check if two values are not equal.
     - **Greater Than (>)**: Check if the left value is greater than the right value.
     - **Less Than (<)**: Check if the left value is less than the right value.
     - **Greater Than or Equal To (>=)**: Check if the left value is greater than or equal to the right value.
     - **Less Than or Equal To (<=)**: Check if the left value is less than or equal to the right value.

4. **Logical Operators**:
   - These operators combine multiple conditions.
   - Examples:
     - **AND (&&)**: Returns true if both conditions are true.
     - **OR (||)**: Returns true if at least one condition is true.
     - **NOT (!)**: Negates a condition (flips true to false and vice versa).

let's see how we can use these operators to implement basic arithmetic operations in calculator:

// Example calculator functions

const add = (a, b) => a + b;

const subtract = (a, b) => a - b;

const multiply = (a, b) => a * b;

```javascript
const divide = (a, b) => (b !== 0 ? a / b : "Error: Division by zero");

const isEqual = (a, b) => a === b; // Check if two values are equal

const isGreaterThan = (a, b) => a > b; // Check if a value is greater than another

const isPositive = (num) => num > 0; // Check if a number is positive

const isEvenAndPositive = (num) => num % 2 === 0 && num > 0; // Check if a number is even and positive

// Usage

const num1 = 10;

const num2 = 5;

console.log("Addition:", add(num1, num2)); // 15

console.log("Subtraction:", subtract(num1, num2)); // 5

console.log("Multiplication:", multiply(num1, num2)); // 50

console.log("Division:", divide(num1, num2)); // 2
```