**Aim:** Demonstrate Basic calculator and Function overloading using typescript.

**Program:**

class Calculator {

    calculate(a: number, b: number): number;

    calculate(a: string, b: string): string;

    calculate(a: number, b: number, operation: string): number;

    calculate(a: any, b: any, operation?: string): any {

      if (typeof a === "number" && typeof b === "number") {

        if (operation) {

          switch (operation) {

            case "add":

              return a + b;

            case "subtract":

              return a - b;

            case "multiply":

              return a \* b;

            case "divide":

              return b !== 0 ? a / b : "Error: Division by zero";

            default:

              return "Error: Invalid operation";

          }

        }

        return a + b;

      } else if (typeof a === "string" && typeof b === "string") {

        return a + b;

      } else {

        return "Error: Invalid input types";

      }

    }

  }

const calc = new Calculator();

console.log("Add numbers (3 + 5):", calc.calculate(3, 5));

  console.log("Concatenate strings ('Hello', 'World'):", calc.calculate("Hello", "World"));

  console.log("Subtract numbers (10 - 6):", calc.calculate(10, 6, "subtract"));

  console.log("Multiply numbers (4 \* 7):", calc.calculate(4, 7, "multiply"));

  console.log("Divide numbers (12 / 4):", calc.calculate(12, 4, "divide"));

  console.log("Division by zero (12 / 0):", calc.calculate(12, 0, "divide"));

  console.log("Invalid operation (5 ? 3):", calc.calculate(5, 3, "invalid"));

**Output:**

