Week 07 : Programming Assignment 1

Implement a Simple Calculator

A `Calculator` class is provided. Your task is to implement the following:

- A parameterized constructor to initialize two numbers.
- Methods for addition, subtraction, multiplication, and division.
- The division method should handle division by zero and print "Cannot divide by zero!" if attempted.

Follow the naming conventions in the given template code.

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1	10 10	Sum: 20\n Difference: 0\n Product: 100\n Quotient: 1	Sum: 20\n Difference: 0\n Product: 100\n Quotient: 1\n	Passed

The due date for submitting this assignment has passed.
1 out of 1 tests passed.
You scored 100.0/100.

Assignment submitted on 2025-03-06, 13:26 IST
Your last recorded submission was :

```java
import java.util.Scanner;

class W07_1 {
    private int num1;
    private int num2;
W07_1(int num1, int num2){
    this.num1 = num1;
    this.num2 = num2;
}

int add(){
    return num1 + num2;
}

int multiply(){
    return num1 * num2;
}

int divide(){
    try{
        int result = num1/num2;
        return result;
    }
    catch(ArithmeticException e){
System.out.println("Cannot divide by zero!");
        return 0;
    }
}


int subtract(){
    int result = num1-num2;
    return Math.abs(result);
}
public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int a = scanner.nextInt();
        int b = scanner.nextInt();

        W07_1 calc = new W07_1(a, b);
        System.out.println("Sum: " + calc.add());
        System.out.println("Difference: " + calc.subtract());
        System.out.println("Product: " + calc.multiply());
        System.out.println("Quotient: " + calc.divide());

        scanner.close();
    }
}
```

Sample solutions (Provided by instructor)

```java
import java.util.Scanner;

class W07_1 {
    private int num1;
    private int num2;
public W07_1(int num1, int num2) {
        this.num1 = num1;
        this.num2 = num2;
    }

    public int add() {
        return num1 + num2;
    }

    public int subtract() {
        return num1 - num2;
    }

    public int multiply() {
        return num1 * num2;
    }

    public int divide() {
        if (num2 == 0) {
            System.out.println("Cannot divide by zero!");
            return 0;
        }
        return num1 / num2;
    }
public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int a = scanner.nextInt();
        int b = scanner.nextInt();

        W07_1 calc = new W07_1(a, b);
        System.out.println("Sum: " + calc.add());
        System.out.println("Difference: " + calc.subtract());
        System.out.println("Product: " + calc.multiply());
        System.out.println("Quotient: " + calc.divide());

        scanner.close();
    }
}
```