

```
import java.util.Scanner;

public class ModularCalculator {

    // Addition (int)
    public static int add(int a, int b) {
        return a + b;
    }

    // Addition (double) - Method Overloading
    public static double add(double a, double b) {
        return a + b;
    }

    // Subtraction
    public static int subtract(int a, int b) {
        return a - b;
    }

    // Multiplication
    public static int multiply(int a, int b) {
        return a * b;
    }

    // Division with Exception Handling
    public static double divide(int a, int b) {
        if (b == 0) {
            throw new ArithmeticException("Cannot divide by zero");
        }
        return (double) a / b;
    }
}
```

```
// Utility method (Reusable)

public static void displayResult(String operation, double result) {
    System.out.println(operation + " Result: " + result);
}

public static void main(String[] args) {

    Scanner sc = new Scanner(System.in);

    System.out.print("Enter first number: ");
    int num1 = sc.nextInt();

    System.out.print("Enter second number: ");
    int num2 = sc.nextInt();

    displayResult("Addition", add(num1, num2));
    displayResult("Subtraction", subtract(num1, num2));
    displayResult("Multiplication", multiply(num1, num2));

    try {
        displayResult("Division", divide(num1, num2));
    } catch (ArithmaticException e) {
        System.out.println("Error: " + e.getMessage());
    }

    // Method Overloading demo
    System.out.println("Addition (double): " + add(10.5, 20.5));

    sc.close();
}
```

}

```
Windows PowerShell X + X - ⌂ X

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\OMSAI> cd Downloads
PS C:\Users\OMSAI\Downloads> javac ModularCalculator.java
PS C:\Users\OMSAI\Downloads> java ModularCalculator
Enter first number: 12
Enter second number: 15
Addition Result: 27.0
Subtraction Result: -3.0
Multiplication Result: 180.0
Division Result: 0.8
Addition (double): 31.0
PS C:\Users\OMSAI\Downloads> |
```



The screenshot shows a Windows 10 desktop environment. A Windows PowerShell window is open in the center, displaying Java code execution. The taskbar at the bottom has several pinned icons: File Explorer, Mail, Edge, OneDrive, Task View, and File History. The system tray shows the date (20-01-2026), time (20:43), battery status, signal strength, and language (ENG IN).