

```
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();

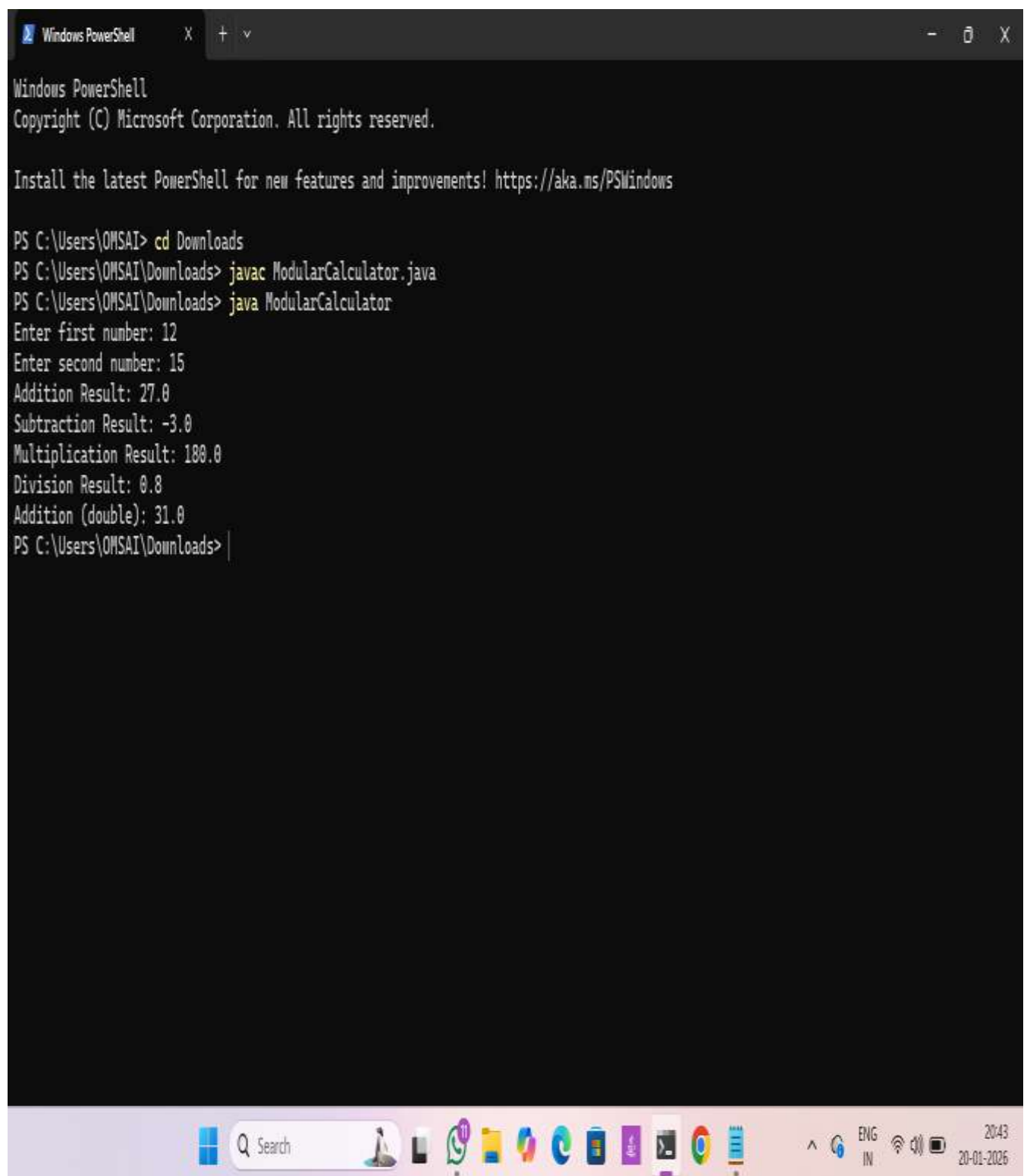
    displayResult("Addition", add(num1, num2));
    displayResult("Subtraction", subtract(num1, num2));
    displayResult("Multiplication", multiply(num1, num2));

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

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

    sc.close();
}
```

}



```
Windows PowerShell
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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 PowerShell window with a dark background. The title bar indicates it's a PowerShell window. The output shows the user navigating to the Downloads folder and running a Java program. The program prompts for two numbers, 12 and 15, and then displays the results of addition, subtraction, multiplication, division, and a double addition. The Windows taskbar is visible at the bottom, showing various application icons and system status information like language (ENG IN) and date (20-01-2026).