

Calculator Using interface

```
import java.util.Scanner;
interface Calculator {
    double add(double x, double y);
    double subtract(double x, double y);
    double multiply(double x, double y);
    double divide(double x, double y);
}
class BasicCalculator implements Calculator {
    @Override
    public double add(double x, double y) {
        return x + y;
    }

    @Override
    public double subtract(double x, double y) {
        return x - y;
    }

    @Override
    public double multiply(double x, double y) {
        return x * y;
    }
    @Override
    public double divide(double x, double y) {
        if (y == 0) {
            System.out.println("Cannot divide by zero!");
            return Double.NaN; // NaN represents an undefined
number
        }
        return x / y;
    }
}

public class CalculatorApp {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
```

```

Calculator basicCalculator = new BasicCalculator();

System.out.println("Enter two numbers:");
double num1 = scanner.nextDouble();
double num2 = scanner.nextDouble();

System.out.println("Select an operation: ");
System.out.println("1 - Addition");
System.out.println("2 - Subtraction");
System.out.println("3 - Multiplication");
System.out.println("4 - Division");
int operation = scanner.nextInt();

double result = 0;

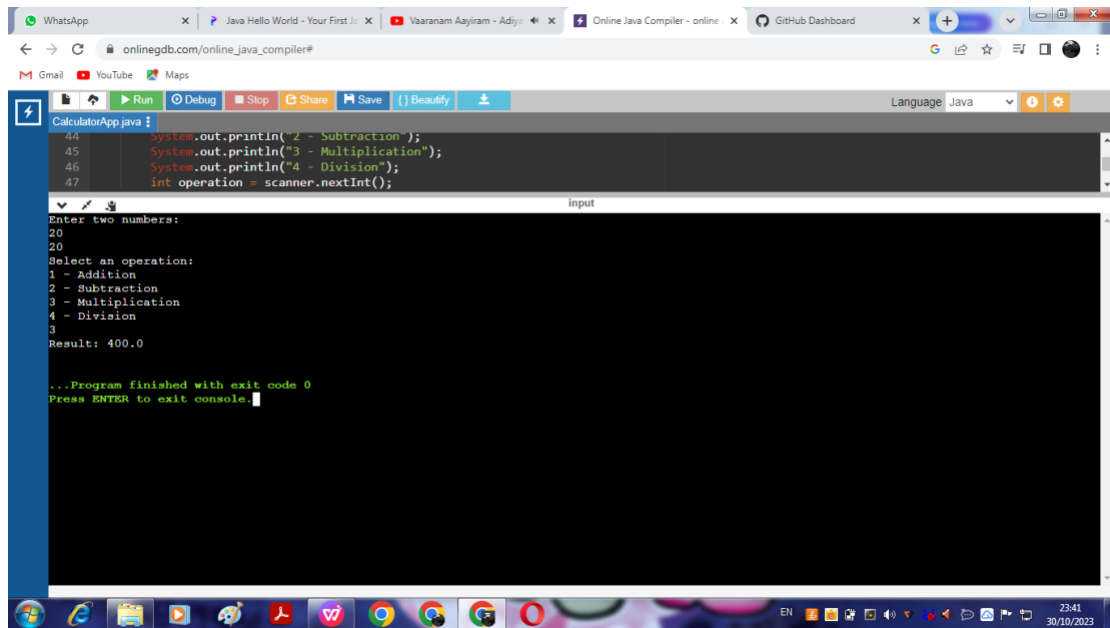
switch (operation) {
    case 1:
        result = basicCalculator.add(num1, num2);
        break;
    case 2:
        result = basicCalculator.subtract(num1, num2);
        break;
    case 3:
        result = basicCalculator.multiply(num1, num2);
        break;
    case 4:
        result = basicCalculator.divide(num1, num2);
        break;
    default:
        System.out.println("Invalid operation");
}

System.out.println("Result: " + result);

scanner.close();
}
}

```

Output:



The screenshot shows a web browser window with several tabs open, including WhatsApp, Java Hello World, Vaaranam Aayiram, and Online Java Compiler. The active tab is the Online Java Compiler, which displays a Java program named 'CalculatorApp.java'. The code is as follows:

```
44 System.out.println("2 - Subtraction");
45 System.out.println("3 - Multiplication");
46 System.out.println("4 - Division");
47 int operation = scanner.nextInt();
```

Below the code editor, the 'Input' section shows the program's execution output:

```
Enter two numbers:
20
20
Select an operation:
1 - Addition
2 - Subtraction
3 - Multiplication
4 - Division
3
Result: 400.0

...Program finished with exit code 0
Press ENTER to exit console
```

The output indicates that the program successfully executed, performing a multiplication operation (20 * 20) and resulting in 400.0. The program finished with an exit code of 0, and the user is prompted to press ENTER to exit the console.