```
import java.util.Scanner;

class Complex {

    float real, imag;


    Complex() {
        this.real = 0;
        this.imag = 0;
    }


    Complex(float real, float imag) {
        this.real = real;
        this.imag = imag;
    }
    void add(Complex c) {
        float r = this.real + c.real;
        float i = this.imag + c.imag;
        System.out.println("Addition: " + r + " + " + i + "i");
    }


    void sub(Complex c) {
        float r = this.real - c.real;
        float i = this.imag - c.imag;
        System.out.println("Subtraction: " + r + " + " + i + "i");
    }

    void mul(Complex c) {
        float r = (this.real * c.real) - (this.imag * c.imag);
        float i = (this.real * c.imag) + (this.imag * c.real);
        System.out.println("Multiplication: " + r + " + " + i + "i");
    }


    void div(Complex c) {
        float denominator = (c.real * c.real) + (c.imag * c.imag);
        if (denominator == 0) {
            System.out.println("Error: Division by zero");
            return;
        }
        float r = ((this.real * c.real) + (this.imag * c.imag)) /
denominator;
        float i = ((this.imag * c.real) - (this.real * c.imag)) /
denominator;
        System.out.println("Division: " + r + " + " + i + "i");
    }
}

public class Main2 {

    public static void main(String[] args) {
```

```
        Scanner sc = new Scanner(System.in);
        int choice;

        do {
            System.out.println("\n1. Addition");
            System.out.println("2. Subtraction");
            System.out.println("3. Multiplication");
            System.out.println("4. Division");
            System.out.println("5. Exit");
            System.out.print("Enter your choice: ");
            choice = sc.nextInt();

            if (choice == 5) {
                break;
            }

            System.out.print("Enter real part of the first number: ");
            float real1 = sc.nextFloat();
            System.out.print("Enter imaginary part of the first number:
");
            float imag1 = sc.nextFloat();
            Complex c1 = new Complex(real1, imag1);

            System.out.print("Enter real part of the second number: ");
            float real2 = sc.nextFloat();
            System.out.print("Enter imaginary part of the second number:
");
            float imag2 = sc.nextFloat();
            Complex c2 = new Complex(real2, imag2);

            switch (choice) {
                case 1:
                    c1.add(c2);
                    break;
                case 2:
                    c1.sub(c2);
                    break;
                case 3:
                    c1.mul(c2);
                    break;
                case 4:
                    c1.div(c2);
                    break;
                default:
                    System.out.println("Invalid choice, try again.");
            }

        } while (choice != 5);

        System.out.println("Program exited successfully.");
        sc.close();
    }
}
```