

mini project (developing a basic calculator that perform basic arithmetic operations)

```
import java.util.Scanner;

public class SimpleCalculator {

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

        // Display welcome message
        System.out.println("Welcome to the Simple Calculator!");

        // Get user input for first number
        System.out.print("Enter first number: ");
        double num1 = scanner.nextDouble();

        // Get user input for operator
        System.out.print("Enter operation (+, -, *, /): ");
        char operator = scanner.next().charAt(0);

        // Get user input for second number
        System.out.print("Enter second number: ");
        double num2 = scanner.nextDouble();

        // Perform calculation based on operator
        double result = 0;
        switch (operator) {
            case '+':
                result = num1 + num2;
                break;
            case '-':
                result = num1 - num2;
                break;
            case '*':
                result = num1 * num2;
                break;
            case '/':
                if (num2 == 0) {
                    System.out.println("Error: Division by zero!");
                    break;
                }
                result = num1 / num2;
                break;
            default:
                System.out.println("Invalid operator!");
                break;
        }
    }
}
```

```

}

// Display the result
if (operator != ' ') {
System.out.printf("%.2f %c %.2f = %.2f\n", num1, operator, num2, result);
}

// Ask user if they want to try again
System.out.print("Try again? (y/n): ");
String retry = scanner.next().toLowerCase();

// Repeat if user wants to
if (retry.equals("y")) {
main(args); // Restart program
} else {
System.out.println("Thank you for using the Simple Calculator!");
}
}
}
}

```

output:

1)Welcome to the Simple Calculator!

Enter first number: 30

Enter operation (+, -, *, /): +

Enter second number: 4

30.00 + 4.00 = 34.00

Try again? (y/n): /

Thank you for using the Simple Calculator!

output 2:

Welcome to the Simple Calculator!

Enter first number: 34

Enter operation (+, -, *, /): -

Enter second number: 23

34.00- 23.00= 11.00

Try again? (y/n): \

Thank you for using the Simple Calculator!