

Calculator

This is a simple calculator that can add up integers.

Code

```
package Module_4_1;

public class Calculator {
    private int result = 0;

    public void add(int number) {
        // Throw exception if number is negative
        if (number < 0) {
            throw new IllegalArgumentException("Number must be positive");
        }
        result += number;
    }

    public void reset() {
        result = 0;
    }

    public int getResult() {
        return result;
    }

    // Create main method that tests the Calculator class
    public static void main(String[] args) {
        Calculator calculator = new Calculator();
        calculator.add(5);
        System.out.println(calculator.getResult());
        calculator.add(10);
        System.out.println(calculator.getResult());
        calculator.reset();
        System.out.println(calculator.getResult());
        calculator.add(-5);
    }
}
```

Output

```
5
15
0
```

Exception in thread "main" java.lang.IllegalArgumentException: Number must be positive

```
at Module_4_1.Calculator.add(Calculator.java:10)
at Module_4_1.Calculator.main(Calculator.java:24)
```

Explanation

The Calculator class adds numbers together. It has three methods:

- add(int number): Adds the input number to the result. If the input number is negative, it throws an IllegalArgumentException.
- reset(): Resets the result to 0.
- getResult(): Returns the current result.

In the main method, we create a new Calculator object and call the add method with 5 and 10.

We then print the result after each addition.

After that, we reset the calculator and print the result again.

Finally, we call the add method with a negative number, which throws an IllegalArgumentException.