

Task 1:

In SimpleJavaCalculator (calculator.java) there are 3 Code Smells:

1. Long if chain → every time i add a new operation(like square root),I must modify this class.

3. Tight coupling → one class knows all operation details.

4. Hard to maintain or test

Problem because:

If chain: Huge block inside calculateBiImpl(),calculateMono() etc

Adding new type: Modify core logic

Maintainability: Poor

Task 2:

I choose Factory Design Pattern,composite and command Design pattern.

Factory Method Pattern — centralizes object creation logic.

Task 3:

I choose Factory Design Pattern,composite and command Design pattern. Because its all support the code to icnrease reusability,maintainability etc...