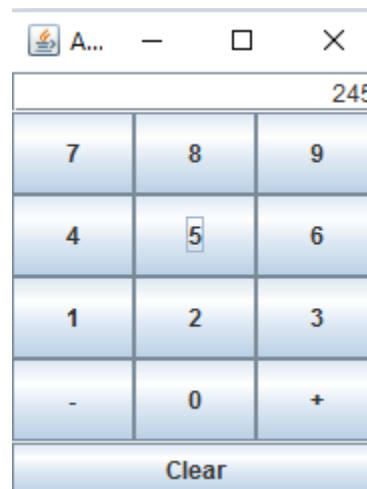


Lab 4

For this lab I will demo a working version of the solution at the beginning of lab. Your task will be to implement one of the classes of the project that represents the central abstraction of an Accumulator. The GUI for this project is shown below:



This application, while resembling a calculator, represents an adding machine in which a number is entered on the keypad one digit at a time, and then either added or subtracted from a running total. The running total is displayed after each new number is accumulated into the sum. The clear button causes the running total to be zeroed as well as any number that has been entered but not yet accumulated.

All work must be done individually. Never look at someone else's code. Please refer to the course policies if you have any questions about academic integrity. If you have trouble with the assignment, I am always available for assistance.

1. Download the Lab4.zip file from the course web page. Extract the zip file to your computer's hard drive into the folder that contains IntelliJ projects (or some other location that you prefer).
2. Open the project in IntelliJ, from the Build menu select "Build Project". You should not get any errors. Then open the AddingMain.java file and run the program with AddingMain as your main application class. You should get the GUI window depicted above, but with none of the buttons working.

3. Open the Accumulator.java file. Notice that this class has been designed (it has a collection of methods and their signatures, with comments indicating what that method's behavior should be). However, the class does not yet have any instance variables that represent the state of an Accumulator object. Spend some time thinking about what the state of an Accumulator should consist of, and how you will model or represent that with instance variables. Then declare these variables at the top of the class, before the first method.
4. Now that you have a representation selected, provide an implementation of each method, accessing and modifying the appropriate instance variables in each case in order to satisfy that method's specification.
5. Submit your completed Accumulator.java file to me via email.