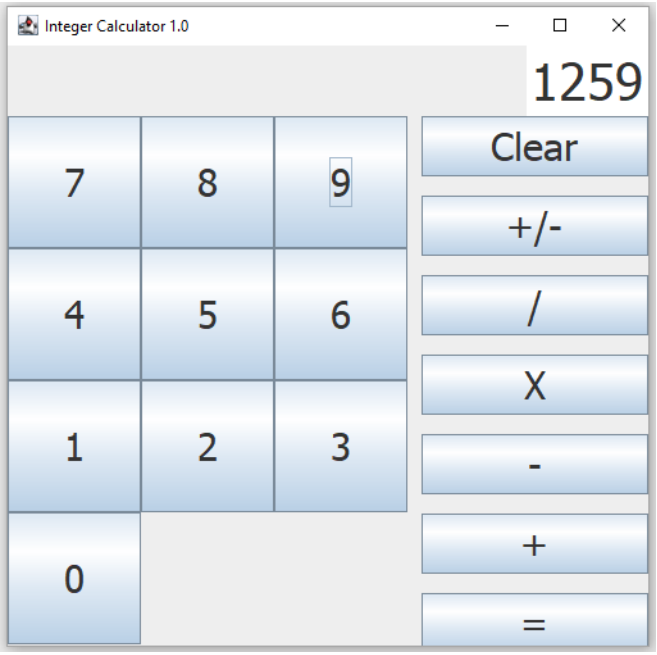
Lab Assignment 1

Integer Calculator



Sample GUI for the Integer Calculator.

Required Asthmatic Operations:

- Addition
- Subtraction
- Multiplication
- Division

Required Functionality

- Handles negative numbers
- Handles division by zero
- Allows double clicking on operators
- Does calculations using Integers
- Has functionality to reset

Rubric

- 20 points - Arthimetic.java with javadoc comments
- 20 points - Handles basic arithmetic operations
- 30 points - Functioning GUI
- 30 points - Works as expected

Lab Assignment 1

Description

Write a Java program for a simple integer calculator. This calculator needs to be able to handle simple arithmetic operations such as: addition, subtraction, multiplication and division. Make sure that your calculator can handle division by zero and allows double clicking on operators. Basically make sure that it functions and does not crash if something is clicked out of order. It should also be able to handle negative numbers.

It is important that your final submission is a fully functioning progam and meets the minimum requirements described here. We need to learn to finish projects and not submit code that doesn't compile and run. Overall this is a straight forward task, a simple calculator that does four different operations. We are now at the level where this should not be an issue to implement.

Implementation Details

This calculator only needs to handle integers and will not have functionality with decimal numbers. When doing division operations, it will be integer division and the results will be truncated. For example 5/2 will simply result in 2, the decimal numbers are dropped.

Write a class named ***Arthimetic.java*** to represent the basic arithmetic operations. It should have a minimum of four different methods, addition, subtraction, multiplication and division. It can have helper methods as well, it is up to you and your design if you need more helper methods in this class.

Your calculator needs to be able to handle negative numbers. The easiest way to handle this is by adding an extra button that can negate the number inputed.

You will also need to have a class which acts as a driver for this application. The driver program should have all of the GUI components and action listeners.

Your interface needs to be a GUI, similar to the one on the previous page. Eclipse offers a GUI drag and drop builder with WindowBuilder, a plug-in for Eclipse which can be download for free. There are plenty of tutorials on YouTube on how to get that installed.

Submission

For your submission, upload all of the files necessary to run the project. For best results upload the zip file of the project folder.

This is an individual assignment. Therefore, a submission is required from each student.

Deadline: on Canvas