

Second thoughts about addition

Purpose

To review inheritance

Directions

Your task for this lab is to write two classes: `Adder` and `AdderWithUndo`. The `Adder` class should keep a running total of integers passed to the class via a method called `add`. The `AdderWithUndo` should extend `Adder` and do the same thing, but also have an `undo` method that will decrease the total by the last amount that was added. Calling the `undo` method repeatedly will just repeatedly subtract the last value that was added (see the example below).

Your classes should have the following fields and methods:

`Adder`:

```
private int total
public Adder()
public void add(int value)
public String toString()
```

`AdderWithUndo`:

```
private int lastValueAdded
public AdderWithUndo
public void add(int value)
public void undo()
```

Note that your classes must have *all* of these fields and methods and *only* these fields and methods. Also, the access modifiers must be those given above (i.e. things marked private must be private in your code). You must follow these directions to receive credit.

Example

If the following code is run, the results will be as shown below.

```
Adder a1 = new Adder();
System.out.println(a1);
a1.add(5);
System.out.println(a1);
a1.add(-2);
System.out.println(a1);
```

```
AdderWithUndo a2 = new AdderWithUndo();
System.out.println(a2);
a2.add(14);
System.out.println(a2);
a2.add(2);
System.out.println(a2);
a2.undo();
System.out.println(a2);
a2.undo();
System.out.println(a2);
```

```
Total: 0
Total: 5
Total: 3
Total: 0
Total: 14
Total: 16
Total: 14
Total: 12
```