

Create a class Counter in a file Counter.java that stores an integer count value and provides methods to access and increment the count value. All class fields (variables) should be private; access to the counter is only allowed via class methods.

The Counter class should also have an optional maximum count value: when the counter surpasses this value it is set to 0.

The Counter class should have a reset() function to allow it to be reset by the user. It should also have an unReset() function which restores the value the counter had before the last reset() call. You'll have to find a way to keep track of what the value was when it was last reset.

The class Counter should include 2 constructors: a default constructor which creates a counter with no maximum value, and a constructor taking an int parameter which creates a counter with a maximum value.

Signature	Description
public Counter()	Default constructor, creates a Counter object with no maximum value
public Counter(int maximum)	Creates a Counter object with the specified maximum value

The class Counter should include the following methods:

Signature	Description
public void setMaximumCount(int maximum)	Sets the maximum value of the counter. If set to -1, that means the maximum value is disabled.
public int getMaximumCount()	Returns the maximum value of the counter.
public int getCount()	Returns the current value of the counter
public void incrementCount()	Increments the counter. If the counter surpasses the maximum count value, resets the counter to 0
public void reset()	Resets the counter to 0
public void unReset()	Restores the counter to the value it had before the last reset. If the counter has not yet been reset, do not change it. If the previous value is higher than the maximum allowed, the counter should be set to 0