HW 10

Make the MyList interface extend Cloneable[1, 2]. Add a clone function to IntList and LongList that makes a copy of the linked list starting at *this* until the end of the list (i.e., until *next* is *null*). Return the node at the head of the new list. You may assume that the list contains no more than 1K nodes -- this makes it easier to clone the list without close list being a reverse of the original list.

An updated main that calls this clone function will be supplied sometime today.

Turn this in as a zip file named as in the other homeworks.

1: Note that an interface cannot implement another interface Y because that would imply that it contains concrete methods that are the implementation of Y. An interface can extend multiple interfaces, however. It cannot extend a class Z as that would result in the interface having the concrete methods that it inherited from the class Z, and interfaces have no concrete methods. In contrast, an abstract class can implement an interface and extend a class. If it implements an interface it need not provide implementations of the abstract methods in the interface -- if not implemented these are added to the abstract methods of the class that need to be implemented by some class extending (directly or indirectly) the abstract class.

2: For Cloneable, you actually need to add the clone( ) method to the MyList interface to force it to be implemented. This is because implementing Cloneable, by any class or interface, doesn't require that a clone( ) method be implemented.