The goal of this assignment is to practice using lists and stacks and to become familiar with iterators in Java.

1. Implement sets using ordered reference-based lists. Use the class LinkedList described in the textbook and assume your universe is the set of digits (0 to 9). Also, use list iterators when appropriate. Implement the class mySet that provides the following operations:
   a. create(), creates and empty set
   b. add(int), adds an element to the set, throws exception if argument is not a digit
   c. remove(int), removes element from the set, throws exception if argument is not in set
   d. union(mySet),
   e. intersection(mySet)
   f. difference(mySet)
   g. complement()
   h. Cartesian product(mySet)
   i. print();

For example, consider the following code fragment:

A.create();
B.create();
A.add(4);
A.add(0);
B.add(5);
B.add(0);
C=A.union(B);
D=A.intersection(B);
E=C.complement();
A.print();
B.print();
C.print();
D.print();
E.print();
A.cartesianProduct(D);

Assuming all variables have been declared appropriately, the resulting output should be:

{0,4}
{0,5}
{0,4,5}
{0}
{1,2,3,6,7,8,9}
{{0,0},{4,0}}

2. Write a program to solve the Towers of Hanoi, using a stack instead of recursion