package linklistpart1;

import java.util.Scanner;

import java.util.Stack;

**public class LinkListPart1<T>** {

/\*\*

\*

\* @param <T> generic!!

\*/

**private class Node<T>{**

T element;

Node<T> next;

// has only 2 parts: item and pointer

**public Node(T e){** // type and element

element = e; // load it

// next is not designated so it is NULL!!!

}// self referencing constructor!!

}//node

///////////////////////////////////////////

private int size =0;

private Node head; // where it starts

private Node tail; // where it ends

private Node temp; // use to move through

**public LinkListPart1(){**

// basic constructor for the empty list

head = new Node(null);

tail = new Node(null);

size=0;

}//constructor

**public static void main(String[] args) {**

LinkListPart1 list = new LinkListPart1();

list.add("Brandon");

// methods are tested below

}//main

}//class

*Every method should have an echo at the beginning such as:*

***Sout(“In the isEmpty method”)****;*

Do ONE at a time!!!

**Add** - adds to the back of the list

public <T> void add(T e){

System.out.println("In add (at the back of the list) method :"+e);

if (size ==0){

head = tail = new Node<>(e);

System.out.println("We loaded the first one!!");

size++;}//if

else // add it to the list

{

Node temp = new Node(e); // to add

Node current = head;

while(current.next !=null){

//move down the list

current = current.next;

}//while

// at the end so load it

current.next = temp;

tail = temp;//re point the tail

size++;

} //else

}//add

**isEmpty -** easy just check size

**getSize -** easy see above

**clear** - set the head to null and don’t forget size

**show** - use a while loop and move down the list

**contains(E o)** - see above and look at each

**addFront (E o)**

**delete**

*public T delete(){*

*System.out.println("Delete method (in the front) ");*

*show();*

*if (size == 0) {*

*System.out.println("The list is empty");*

*return null;*

*}//if*

*else {*

*Node<T> temp = head;*

*head = head.next;*

*size--;*

*if (head == null) {*

*System.out.println("The list is NOW empty");*

*tail = null;*

*}//if*

*show();*

*return temp.element;*

*}//else*

*}//delete*