CSc 127B — Introduction to Computer Science II
Fall 2015 (McCann)

In-Class Activity #7

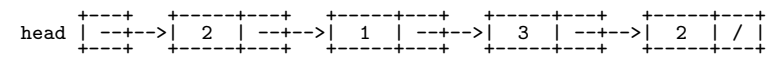
Name #1: _____ Section Leader: _____

Name #2: _____ Section Leader: _____

Name #3: _____ Section Leader: _____

Directions: In groups of 2 or 3, without using electronics, answer the following questions to the best of your combined abilities. When appropriate, show your work, to help us understand your thought process. ICAs (In-Class Activities) count toward your grade; please take them seriously. Week 10 (2015/10/28)

The parts of this week's ICA refer to this linked-list method. Assume that `head` is an existing instance variable of type `Node` that is referencing the first node of this list of integers:




```
1  public void unknown (int target)
2  {
3      Node fore = head, aft = null;
4
5      while (fore != null) {
6          if (fore.getData() == target) break;      // leave the loop immediately
7          aft = fore;
8          fore = fore.getNext();
9      }
10
11     if (fore != null) {
12         aft.setNext(fore.getNext());
13     }
14 }
```

1. Trace the execution of this method when target = 3. What does the list look like after the execution has finished? (Draw a picture to show us.) If you think that the program will crash during the execution, explain why.

2. Trace the execution of this method again when target = 3, **but this time assume that head = null**. What does the list look like after the execution has finished? If you think that the program will crash during the execution, explain why.

3. Trace the method one last time, again using the original list, and assuming that target = 2. What does the list look like after the execution has finished? If you think that the program will crash during the execution, explain why.

When your group is satisfied with your answers, or time is up, hand this to one of the class staff. We'll review the correct answers after time is up.