A3 is due after the break, but start on it NOW

Read HyperText entry on Study/work habits

When given new tasks to get done,
Procrastinate right from day one.
You think that’s not fine?
It gives you more time
To catch up at last as you’re done.

Assignment A3: Linked Lists

Idea: maintain a list \((2, 5, 7)\) like this:

This is a singly linked list

To save space, we write names like a6 instead of N@35abcd00

How to insert a node at the beginning

\((2, 5, 7)\)

\((2, 5, 7)\)

How to remove successor of a node in the middle

\((2, 5, 8, 7)\)

\((2, 5, 7)\)

Assignment A3: Generics

```java
public class LinkedList {
    void add(Object elem) {…}
    Object get(int index) {…}
}
```

Values of linked list are of class Object

```java
public class LinkedList<E> {
    void add(E elem) {…}
    E get(int index) {…}
}
```

You can specify what type of values

```java
ns = new LinkedList<Integer>();
ss = new LinkedList<String>();
ns.add("Hello"); // error
ns.add(5); // error
String s = ns.get(0); // error
int n = ns.get(0);
```

```java
ss.add("Hello");
ss.add(5); // error
String s = ss.get(0);
int n = ss.get(0); // error
```

Assignment A3: Inner class

```java
public class DList<E> {
    private Node first;
    …
    public E first() { return first.val; }
    …
    private class Node {
        private Node prev;
        private E val;
    }
}
```

Outer class can and should use fields of class Node, even though they are private.

```java
class private class Node {
    private Node prev;
    private E val;
    }
```