Back to linked lists

- Snarf the code to today's recitation
- Look at the code
- What is similar between a Node in a linkedList and a Node in a tree? (compare this code to Wednesday's)

Announcements

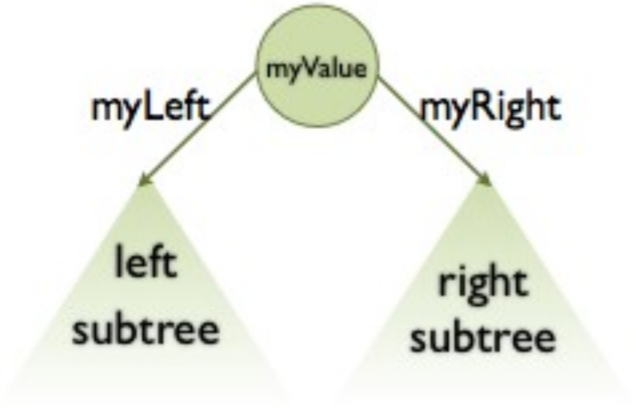
- New assignment (on linked lists) after fall break

Today

- Revisit linked lists
- Code with linked lists
  - very helpful for the next assignment

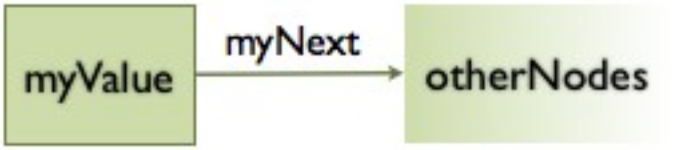
Trees: linked structure

```
IntTreeNode root = null;

    public class IntTreeNode {
        public int myValue;
        public IntTreeNode myLeft; // holds smaller tree nodes
        public IntTreeNode myRight; // holds larger tree nodes

        public IntTreeNode(int val) { value = val; }
    }
```

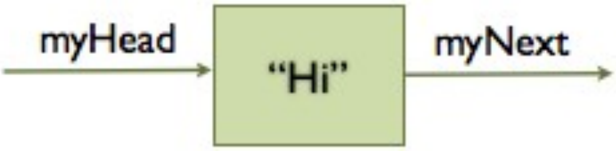


Linked lists

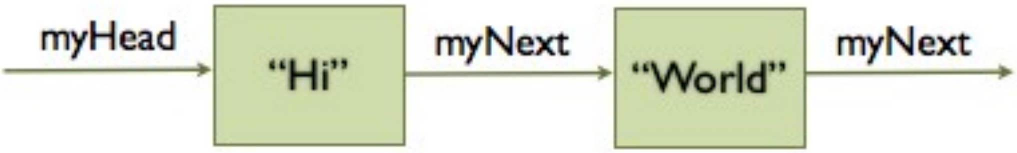
```
private Node myHead;

    private class Node {
        String myValue;
        Node myNext;

        Node(String value, Node next)
        {
            myValue = value;
            myNext = next;
        }
    }
```



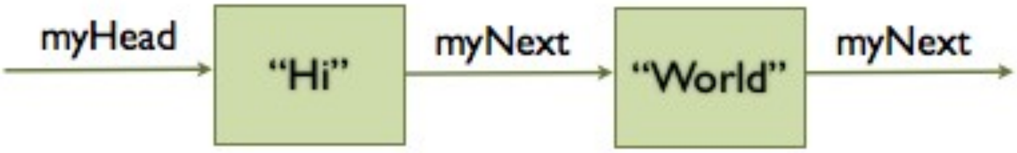
```
public void addAtBeginning(String valueToAdd)
  {
      myHead = new Node(valueToAdd, myHead);
  }

.
.
StringLinkedList s = newStringLinkedList();
s.addAtBeginning(“Hi”);
```



```
public void addAtEnd(String valueToAdd)
    {
        //some code goes here
    }

.
.
s.addAtEnd("World");
```



```
public void removeLongestString()
{
        // your code goes here
        // when you implement this function, be sure to think about
        // a.  what if the list is empty
        // b.  what if the longest element is the first element
        // c.  what if the list has only 1 element
}
```



Your turn

- doubleList()
  - Takes a list and doubles each element [a,b,c] -> [a,a,b,b,c,c]
- moveToEnd(int k)
  - move k elements to the end of the list
  - if k = 2, [a,b,c,d] -> [c,d,a,b]
- reverse()
  - [a,b,c]->[c,b,a]

- Make sure your code passes the unit tests!
- submit to recitation_6 folder