CSC1310: LAB 4
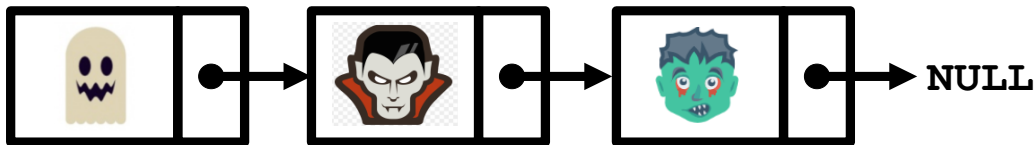
String Linked List

LINKED LIST CLASS

- Design your own linked list class (List.h) to hold a series of **strings**.
- The linked list **node** should be implemented as a **struct** and the struct name should be **ListNode**.
- The List class should also have two pointers to ListNodes created as attributes called **head** and **tail**.
- The class should have member functions for appending a new node, inserting a new node, deleting a node with a given value, displaying the values in all the nodes, a Constructor, and a Destructor.
    - **appendNode** function
        - accept a string as a parameter
        - dynamically allocate a new ListNode and set the ListNode's value to the string sent to this function
        - place the new node at the end of the linked list (use the tail pointer to help!)
    - **insertNode** function
        - accept a string as a parameter
        - dynamically allocate a new ListNode and set the ListNode's value to the string sent to this function
        - place the new node in the linked list alphabetically based on the string values.
    - **deleteNode** function
        - accept a string as a parameter
        - traverse the linked list to search for a node with the same value and delete it when found
    - **displayList** function
        - display each node's value in order from head to tail
    - **Constructor**
        - Initialize head & tail to NULL
    - **Destructor**
        - Delete all nodes that remain in the linked list

DRIVER – LAB4.CPP

The driver program (Lab4.cpp) is provided for you.

SAMPLE OUTPUT

```
The linked list has been created.

I am appending several strings to the list.

boogeyman
ghost
scarecrow
witch
zombie

I am inserting vampire in the list.

boogeyman
ghost
scarecrow
vampire
witch
zombie

I am deleting ghost from the list.

boogeyman
scarecrow
vampire
witch
zombie

All list nodes have been removed.
```

WHAT TO TURN IN

- List.h
- Lab4.cpp