CS 2401 PLTL LESSON PLAN  
Week of: March 5, 2007

Introduction:  
The purpose of the lesson plan for this week will be to enhance the students’ understanding of referenced-based lists. This is the second week that referenced-based lists will be covered in workshop. The goal of this week will be to further the students understanding of linked lists. The students to create an operation on linked lists using iterative loops. The second problem will require the students to use recursion to solve a problem that is based on linked-lists.

Review:  
5 minutes – we will ask the students if they need any topic reviewed.

Groups  
We will split the class into groups of three (or another appropriate size). If last experimental group size worked well, then groups of two may be used again. This will vary from session to session.

Exercise #1:  Linked-Lists and iterative methods (20-25 minutes)  
This exercise is based on the assumption that the students have a basic knowledge of the linked-list structure.

The Students will be asked to construct a single, non-recursive method (and any helper methods they might need). The method is passed a linked-list of unknown size, each node contain character values (these characters are placed randomly in the list). A String is also passed to the method.
The method must modify the order of the nodes in the linked list so that the order of the characters in the nodes matches the order of the character of the string.
If the linked-list contains references to more character nodes that the number of characters in the string, they should be discarded.

Exercise #2:  Linked-Lists and recursion (10-15 minutes)  
A recursive method must be implemented which, given a single node as its parameter, traverses the linked-list and prints all node values which are even number as well as node values who are multiples of 5.
Assume that the nodes only contain integer values.
Assume that the initial call of the method is passed the head of the node as the parameter.

Group Processing:  
If any time remains, we will ask the students to reflect on their performance by sharing one way they can improve, and telling their partner one thing they did well.