

### **ReadFile**

Create a linked list from an input file (input.txt) that contains an even number of first names. The number of items in the file is unknown.

### **SplitMerge**

Create a split function that divides the newly created linked list into two equal sublists: myList1 and myList2. For example, originally you would point to (John, Jack, Jill, Jim). After the split, **myList1** would point to john and jack and **myList2** would point to jill and Jim.

### **Traverse**

Accepts a pointer and displays each of the lists (myList1 and myList2 on the screen) Note: the traverse function takes only one argument, so the function would have to be called twice, once for each of the lists.

### **Merge**

Feed the pointer variables myList1 and myList2 into the Merge function. Create a single list. Return the list.

### **Traverse**

Pass in the pointer variable and display the returned list from the Merge function

Summary:

You need to write at least 5 functions: main, readFile, splitMerge, merge and traverse. The inputs will come from one input files (input.txt). There is no output file. The program should be in a single .cpp file.

### **From within main call**

**ReadFile (Read the contents of file, create a linked list and return the list to main)**

**SplitAndMerge (pass list, splits into list 1 and list 2, void return)**

**From within splitMerge**

**call Traverse (Display contents of list1)**

**call Traverse (Display contents of list2)**

**call Merge (Pass list1 and list2, merge and return one list)**

**call Traverse (Display contents of list coming back from Merge)**