Create a class called LinkedList using the specifications as discussed in class including the .h and .cpp files. Do not find and copy a class off the internet!!

Use the following struct:
```c
struct Node
{ int val; Node * next;}
```

Use the following for your class:
```c
class LinkedList
{ Node * head;
  Public: \ \ methods
    LinkedList \ \ constructor
    PrintList \ \ prints elements of the list one per line
    Insert_Front \ \ inserts element to front of list
    Insert_Rear \ \ inserts element to end of list
    Insert_Ordered \ \ inserts element in numerical order (small to large)
    Delete_Node \ \ removes an element from the list – call Search
    Clear_list \ \ resets the LinkedList to empty
```

Write a main function to test your class. A file will be provided to use for turning in. It will be of the following form – single character designating the operation, integer indicating data if necessary, 0 will be a dummy argument for consistency.

```
P 0 // Print the list
F 34 // Insert 34 to the front of the list
R 78 // Insert 78 to the rear of the list
O 50 // Insert 50 to the list in numerical order
S 79 // Search the list for 79 – print if found or not
O 60 // Insert 60 to the list in numerical order
P 0 // Print the list
D 45 // Delete node containing 45 from the list
D 50 // Delete 50 from the list
P 0 // Print the list
C 0 // Clear the list
```

You will be given an application to use the class for your next project so it is VERY IMPORTANT that the class be thoroughly tested.