```
#include <iostream>
using std::cout;
using std::endl;
using std::ostream;

class list;
ostream& operator <<(ostream &, list &);

class node
{
    int iData;
    node *pNext;

    friend class list;

public:
    node()
    {
        iData = 0;
        pNext = NULL;
    }

    ~node()
    {
        iData = 0;
        pNext = NULL;
    }

    friend ostream& operator <<(ostream &, list &);
};

class list
{
    node *pFirst;

public:
    list()
    {
        pFirst = NULL;
    }

    ~list()
    {
        if(pFirst != NULL)
            DeleteAll();
    }

    void InsertLast(int iNo)
    {
        node *pTemp = NULL;
        node *pNewNode = NULL;

        pNewNode = new node;
        if(NULL == pNewNode)
        {
            cout << "Memory allocation FAILED\n";
            return;
        }

        pNewNode->iData = iNo;
        pNewNode->pNext = NULL;

        if(NULL == pFirst)
        {
            pFirst = pNewNode;
            return;
        }
```

```
68
69          pTemp = pFirst;
70          while(pTemp->pNext != NULL)
71              pTemp = pTemp->pNext;
72
73          pTemp->pNext = pNewNode;
74      }
75
76      void Display()
77      {
78          node *pHead = pFirst;
79
80          if(NULL == pHead)
81          {
82              cout << "List is empty\n";
83              return;
84          }
85
86          while(pHead != NULL)
87          {
88              cout << "|" << pHead->iData << "|->";
89              pHead = pHead->pNext;
90          }
91      }
92
93      void DeleteAll()
94      {
95          node *pTemp = pFirst;
96
97          while(pFirst != NULL)
98          {
99              pTemp = pFirst;
100             pFirst = pTemp->pNext;
101             delete pTemp;
102         }
103     }
104
105     friend ostream& operator <<(ostream &, list &);
106 };
107
108 ostream& operator <<(ostream &out, list &lst)
109 {
110     node *pHead = lst.pFirst;
111
112     if(NULL == pHead)
113     {
114         out << "List is empty\n";
115         return out;
116     }
117
118     while(pHead != NULL)
119     {
120         out << "|" << pHead->iData << "|->";
121         pHead = pHead->pNext;
122     }
123
124     return out;
125 }
126
127 int main(void)
128 {
129     list obj1;
130     list obj2;
131
132     obj1.InsertLast(10);
133     obj1.InsertLast(20);
134     obj1.InsertLast(30);
```

```
135
136       obj2.InsertLast(40);
137       obj2.InsertLast(50);
138       obj2.InsertLast(60);
139
140       cout << "First linked list :\n";
141       obj1.Display();                       // 10 20 30
142       cout << "\n\nSecond linked list :\n";
143       obj2.Display();                       // 40 50 60
144       cout << endl;
145
146       cout << "\nFirst linked list :\n" << obj1 << endl;
147       cout << "\nSecond linked list :\n" << obj2 << endl;
148
149       obj1.DeleteAll();
150       obj2.DeleteAll();
151
152       return 0;
153   }
154
```