

```

1: #include <string>
2: using namespace std;
3:
4: // Lop StringNode
5: // bieu dien mot phan tu trong danh sach lien ket StringLinkedList
6: class StringNode{
7: private:
8:     string data;
9:     StringNode * next;
10:     friend class StringLinkedList;
11: };
12:
13: // Lop StringLinkedList
14: // bieu dien mot danh sach lien ket don cac string
15: class StringLinkedList{
16: public:
17:     StringLinkedList(); // kien tao DS rong
18:     StringLinkedList(char * filename); // kien tao DS chua
19:                                     // cac xau ghi trong tep filename
20:                                     // moi xau tren 1 dong
21:     ~StringLinkedList(); // huy DS
22:     bool empty() const; // DS co rong khong?
23:     const string& first() const; // lay xau luu trong phan tu dau tien
24:     void addFirst(const string & e); // them vao dau DS
25:     void removeFirst(); // xoa phan tu dau DS
26:     const string& last() const; // lay xau luu trong phan tu cuoi cung
27:     void addLast(const string & e); // them vao cuoi DS
28:     void print() const; // in toan bo DS
29:
30: private:
31:     StringNode * head; // con tro toi phan tu dau DS
32:     StringNode * tail; // con tro toi phan tu cuoi DS
33: };
34:

```