

**Class templates:**

```

List.h
1  #ifndef LIST_H
2  #define LIST_H
3
4  template <class T>
5  class List {
6      public:
7
8
9
10
11
12
13
14
15
16
17
18      private:
19
20 };
21
22 #endif

```

```

Snippet: ListNode struct
1  struct ListNode {
2      T & data;
3      ListNode * next;
4      ListNode(T & data) : data(data), next(NULL) { }
5  };

```



**Two Basic Implementations:**

- 1.
- 2.



**Linked Memory:**



## Coding with Linked Lists: Examples

```

List.h
1 #ifndef LIST_H
2 #define LIST_H
3
4 template <class T>
5 class List {
6     public:
7         /* ... */
8     private:
9         struct ListNode {
10             T & data;
11             ListNode * next;
12             ListNode(T & data) : data(data), next(NULL) { }
13         };
14 };
15 #endif
```

```

List.cpp
1 #include "List.h"
2
3 template <class T>
4 void List::insertAtFront(const T& t) {
5
6
7
8
9
10
11
12 }
```

```

List.cpp
1 #include "List.h"
2
3 void List::printReverse() const {
4
5
6
7 }
8
9
10
11
12
```

```

List.cpp
1 #include "List.h"
2
3 ListNode *& List::_find(unsigned index) {
4
5
6
7
8
9 }
10
11
12
```

### CS 225 – Things To Be Doing:

1. Exam #2 (Programming) begins today
2. MP2 is due Sept. 25; Max EC w/ Part 1 today
3. Lab Extra Credit → Attendance in your registered lab section!
4. Daily POTDs