

链式队列基本操作的 C++代码

链式队列

链式队列 LQueue 类的实现

// 向队尾插入元素 item

```
template< class T >
```

```
void LQueue<T>::QInsert ( const T& item ) {
```

```
    if ( IsEmpty ( ) ) { front = rear = new SLNode<T> ( item , NULL ) ; count = 1 ; }
```

```
    else
```

```
        { rear→next = new SLNode <T> ( item, NULL ) ;
```

```
        rear = rear→next ; count + + ;
```

```
        }
```

```
}
```

// 删除队首元素

```
template< class T >
```

```
bool LQueue<T>::QDelete ( T & item ) {
```

```
    if ( IsEmpty ( ) ) { cout <<“Deleting from an empty queue!”<<endl; return false; }
```

```
    SLNode<T> *temp = front ;
```

```
    item = temp→data ;
```

```
    front = front→next ; count - - ;
```

```
    delete temp ;
```

```
    if ( count == 0 ) rear = NULL ;
```

```
    return true ;
```

```
}
```

// 存取队首元素值

```
template< class T >
```

```
bool LQueue<T>::QFront ( T & item ) {
```

```
    if ( IsEmpty ( ) ) { cout <<“Reading from an empty queue!”<<endl; return false; }
```

```
    item = front→data ; return true ;
```

```
}
```

// 清空队列

```
template< class T >
```

```
void LQueue<T>::QClear ( ) {
```

```
    while ( ! IsEmpty ( ) )
```

```
        { rear = front ;
```

```
        front = front→next ;
```

```
        delete rear ; count - - ;
```

```
        }
```

```
    rear = NULL ;
```

```
}
```