three-level linked list

0.0.1

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Contents

Chapter 1

Specification (hungarian)

„Készítsen GENERIKUS rendezett 3 szintű fésűs listát!

Valósítsa meg az összes értelmes műveletet operátor átdefiniálással (overload), de nem kell ragaszkodni mindenáron az operátorok átdefiniálásához! Amennyiben lehetséges használjon iterátort!

Specifikáljon egy egyszerű tesztfeladatot, amiben fel tudja használni az elkészített adatszerkezetet! A tesztprogramot külön modulként fordított programmal oldja meg! A programmal mutassa be a generikus szerkezet használatát több egyszerű adathalmazon, amit fájlból olvas be! A megoldáshoz NE használjon STL tárolót vagy algoritmust!

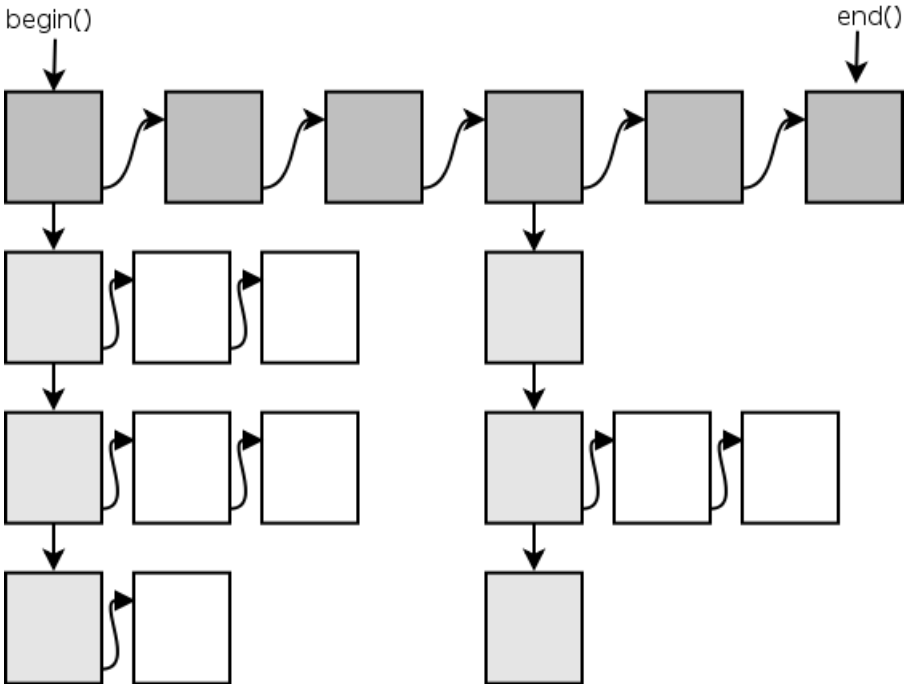
A tesztprogramot úgy specifikálja, hogy az parancssoros batch alkalmazásként (is) működjön, azaz a szabványos bemenetről olvasson, és a szabványos kimenetre, és/vagy a hibakimenetre írjon! Amennyiben a feladat teszteléséhez fájlból, vagy fájlokból kell input adatot olvasnia, úgy a fájl neve *.dat alakú legyen! ”

1.1 Pontosított feladatspecifikáció

A generikus fésűs listához C++ sablonokat fogok használni. A következő operátorok legyenek túlterhelve:

- *operator*+= - egy új elemet hozzáad a listához
- *operator*-= - egy adott elemet kikeres és töröl a listából
- *operator*== - két lista egyenlő
- *operator!*= - két lista nem egyenlő

A 3 szintű fésűs listát az alábbi ábra reprezentálja:



A tároló bejárásához iterátort fogok használni.

Megvalósítandó funkciók:

- Elem hozzáadása a listához
- Elem törlése a listából
- Egy adott elem megkeresése és mutatójának visszaadása

Az iterátor függvényei:

- *begin()* - Első elem mutatójának visszaadása
- *end()* - Utolsó elem mutatójának visszaadása
- *next()* - Következő elem mutatójának visszaadása

A tesztprogram képes lesz szabványos bemenetről és fájlból is olvasni. Mindkét esetben a formátum a következő: Egy sor egy elemet reprezentál. A három szintnek megfelelően 3 elem lehet egy sorban (1, 2 vagy 3).
első szint|második szint|harmadik szint
első szint|második szint

Chapter 2

Class Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

Chapter 5

Class Documentation

5.1 Cmp< T > Class Template Reference

Compare template class. Compare class containing 2 predicate functions (equals, less than) In some cases specialization is needed.

`#include <list.h>`

Static Public Member Functions

- static bool eq (const T &a, const T &b)
- static bool lt (const T &a, const T &b)

5.1.1 Detailed Description

template<typename T> class Cmp< T >

Compare template class. Compare class containing 2 predicate functions (equals, less than) In some cases specialization is needed.

5.1.2 Member Function Documentation

5.1.2.1 template<typename T > static bool Cmp< T >::eq (const T & *a*, const T & *b*) [inline, static]

5.1.2.2 template<typename T > static bool Cmp< T >::lt (const T & *a*, const T & *b*) [inline, static]

The documentation for this class was generated from the following file:

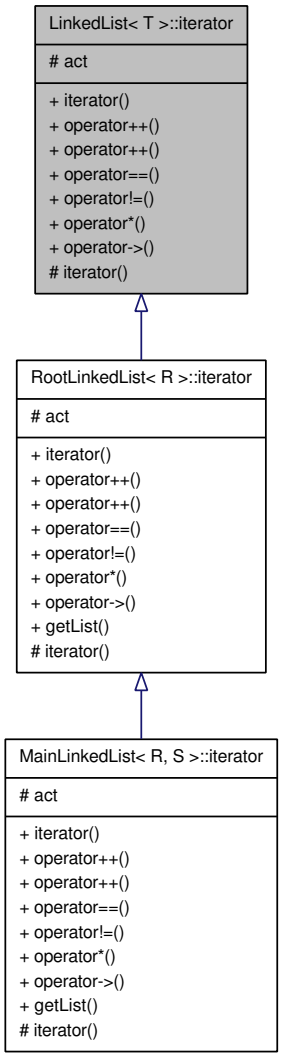
- list.h

5.2 LinkedList< T >::iterator Class Reference

Iterator class.

`#include <list.h>`

Inheritance diagram for LinkedList< T >::iterator:



Public Member Functions

- iterator (void)
- iterator operator++ (void)
- iterator operator++ (int)
- bool operator== (const iterator &i) const
- bool operator!= (const iterator &i) const
- T & operator∗ (void)
- T ∗ operator-> (void)

Protected Member Functions

- iterator (ListItem *li)

Protected Attributes

- ListItem * act

Friends

- class LinkedList< T >

5.2.1 Detailed Description

template<typename T> class LinkedList< T >::iterator

Iterator class.

5.2.2 Constructor & Destructor Documentation

5.2.2.1 template<typename T> LinkedList< T >::iterator::iterator (void) [inline]

Reimplemented in RootLinkedList< R, T >::iterator, and MainLinkedList< R, S, T >::iterator.

5.2.2.2 template<typename T> LinkedList< T >::iterator::iterator (ListItem * *li*) [inline, protected]

5.2.3 Member Function Documentation

5.2.3.1 template<typename T> bool LinkedList< T >::iterator::operator!= (const iterator & *i*) const

5.2.3.2 template<typename T > T & LinkedList< T >::iterator::operator* (void) [inline]

Reimplemented in RootLinkedList< R, T >::iterator, and MainLinkedList< R, S, T >::iterator.

5.2.3.3 template<typename T > LinkedList< T >::iterator LinkedList< T >::iterator::operator++ (int) [inline]

Reimplemented in RootLinkedList< R, T >::iterator, and MainLinkedList< R, S, T >::iterator.

5.2.3.4 template<typename T > LinkedList< T >::iterator LinkedList< T >::iterator::operator++ (void) [inline]

Reimplemented in RootLinkedList< R, T >::iterator, and MainLinkedList< R, S, T >::iterator.

5.2.3.5 template<typename T > T * LinkedList< T >::iterator::operator-> (void) [inline]

Reimplemented in RootLinkedList< R, T >::iterator, and MainLinkedList< R, S, T >::iterator.

5.2.3.6 template<typename T> bool LinkedList< T >::iterator::operator== (const iterator & *i*) const

5.2.4 Friends And Related Function Documentation

5.2.4.1 template<typename T> friend class LinkedList< T > [friend]

5.2.5 Member Data Documentation

5.2.5.1 template<typename T> ListItem* LinkedList< T >::iterator::act [protected]

Reimplemented in RootLinkedList< R, T >::iterator, and MainLinkedList< R, S, T >::iterator.

The documentation for this class was generated from the following files:

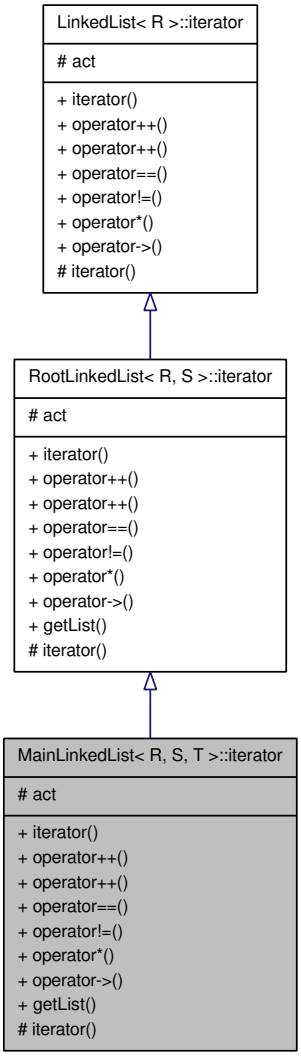
- list.h
- list.hpp

5.3 MainLinkedList< R, S, T >::iterator Class Reference

Iterator class.

`#include <list.h>`

Inheritance diagram for MainLinkedList< R, S, T >::iterator:



Public Member Functions

- iterator (void)
- iterator operator++ (void)
- iterator operator++ (int)
- bool operator== (const iterator &i) const
- bool operator!= (const iterator &i) const
- R & operator∗ (void)
- R ∗ operator-> (void)
- RootLinkedList< S, T > ∗ getList (void)

Containing list.

Protected Member Functions

- iterator (ListItem *li)

Protected Attributes

- ListItem * act

Friends

- class MainLinkedList< R, S, T >

5.3.1 Detailed Description

template<class R, class S, class T> class MainLinkedList< R, S, T >::iterator

Iterator class.

5.3.2 Constructor & Destructor Documentation

5.3.2.1 template<class R , class S , class T > MainLinkedList< R, S, T >::iterator::iterator (void) [inline]

Reimplemented from RootLinkedList< R, T >::iterator.

5.3.2.2 template<class R , class S , class T > MainLinkedList< R, S, T >::iterator::iterator (ListItem * *li*) [inline, protected]

5.3.3 Member Function Documentation

5.3.3.1 template<typename R , typename S , typename T > RootLinkedList< S, T > * MainLinkedList< R, S, T >::iterator::getList (void) [inline]

Containing list.

Returns

pointer to the containing list

Reimplemented from RootLinkedList< R, T >::iterator.

5.3.3.2 template<typename R , typename S , typename T > bool MainLinkedList< R, S, T >::iterator::operator!= (const iterator & *i*) const [inline]

5.3.3.3 template<typename R , typename S , typename T > R & MainLinkedList< R, S, T >::iterator::operator* (void) [inline]

Reimplemented from RootLinkedList< R, T >::iterator.

5.3.3.4 template<typename R , typename S , typename T > MainLinkedList< R, S, T >::iterator MainLinkedList< R, S, T >::iterator::operator++ (int) [inline]

Reimplemented from RootLinkedList< R, T >::iterator.

5.3.3.5 template<typename R , typename S , typename T > MainLinkedList< R, S, T >::iterator MainLinkedList< R, S, T >::iterator::operator++ (void) [inline]

Reimplemented from RootLinkedList< R, T >::iterator.

5.3.3.6 template<typename R , typename S , typename T > R * MainLinkedList< R, S, T >::iterator::operator-> (void) [inline]

Reimplemented from RootLinkedList< R, T >::iterator.

5.3.3.7 template<typename R , typename S , typename T > bool MainLinkedList< R, S, T >::iterator::operator== (const iterator & *i*) const [inline]

5.3.4 Friends And Related Function Documentation

5.3.4.1 template<class R , class S , class T > friend class MainLinkedList< R, S, T > [friend]

5.3.5 Member Data Documentation

5.3.5.1 template<class R , class S , class T > ListItem* MainLinkedList< R, S, T >::iterator::act [protected]

Reimplemented from RootLinkedList< R, T >::iterator.

The documentation for this class was generated from the following files:

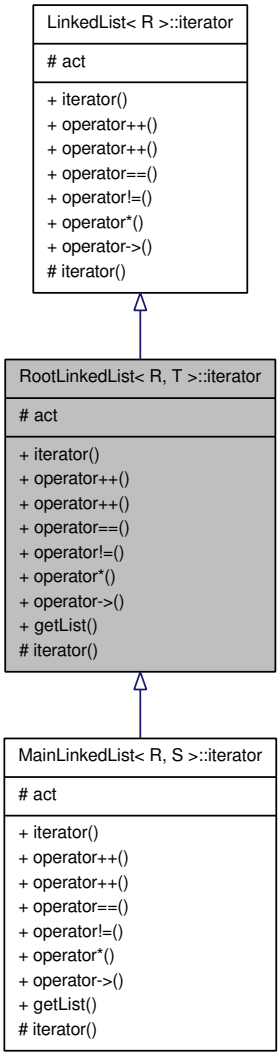
- list.h
- list.hpp

5.4 RootLinkedList< R, T >::iterator Class Reference

Iterator class.

`#include <list.h>`

Inheritance diagram for RootLinkedList< R, T >::iterator:



Public Member Functions

- iterator (void)
- iterator operator++ (void)
- iterator operator++ (int)
- bool operator== (const iterator &i) const
- bool operator!= (const iterator &i) const
- R & operator* (void)
- R * operator-> (void)
- LinkedList< T > * getList (void)

Containing list.

Protected Member Functions

- iterator (ListItem *li)

Protected Attributes

- ListItem * act

Friends

- class RootLinkedList< R, T >

5.4.1 Detailed Description

template<typename R, typename T> class RootLinkedList< R, T >::iterator

Iterator class.

5.4.2 Constructor & Destructor Documentation

5.4.2.1 template<typename R, typename T> RootLinkedList< R, T >::iterator::iterator (void) [inline]

Reimplemented from LinkedList< T >::iterator.

Reimplemented in MainLinkedList< R, S, T >::iterator.

5.4.2.2 template<typename R, typename T> RootLinkedList< R, T >::iterator::iterator (ListItem * *li*) [inline, protected]

5.4.3 Member Function Documentation

5.4.3.1 template<typename R , typename T > LinkedList< T > * RootLinkedList< R, T >::iterator::getList (void) [inline]

Containing list.

Returns

pointer to the containing list

Reimplemented in MainLinkedList< R, S, T >::iterator.

5.4.3.2 template<typename R , typename T > bool RootLinkedList< R, T >::iterator::operator!= (const iterator & *i*) const [inline]

5.4.3.3 template<typename R , typename T > R & RootLinkedList< R, T >::iterator::operator* (void) [inline]

Reimplemented from LinkedList< T >::iterator.

Reimplemented in MainLinkedList< R, S, T >::iterator.

5.4.3.4 template<typename R , typename T > RootLinkedList< R, T >::iterator RootLinkedList< R, T >::iterator::operator++ (int) [inline]

Reimplemented from LinkedList< T >::iterator.

Reimplemented in MainLinkedList< R, S, T >::iterator.

5.4.3.5 template<typename R , typename T > RootLinkedList< R, T >::iterator RootLinkedList< R, T >::iterator::operator++ (void) [inline]

Reimplemented from LinkedList< T >::iterator.

Reimplemented in MainLinkedList< R, S, T >::iterator.

5.4.3.6 template<typename R , typename T > R * RootLinkedList< R, T >::iterator::operator-> (void) [inline]

Reimplemented from LinkedList< T >::iterator.

Reimplemented in MainLinkedList< R, S, T >::iterator.

5.4.3.7 template<typename R , typename T > bool RootLinkedList< R, T >::iterator::operator== (const iterator & *i*) const [inline]

5.4.4 Friends And Related Function Documentation

5.4.4.1 template<typename R, typename T> friend class RootLinkedList< R, T > [friend]

5.4.5 Member Data Documentation

5.4.5.1 template<typename R, typename T> ListItem* RootLinkedList< R, T >::iterator::act [protected]

Reimplemented from LinkedList< T >::iterator.

Reimplemented in MainLinkedList< R, S, T >::iterator.

The documentation for this class was generated from the following files:

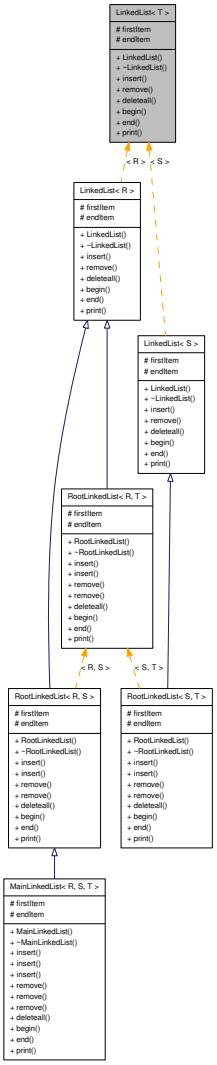
- list.h
- list.hpp

5.5 LinkedList< T > Class Template Reference

Linked list class. Simple sorted linked list class.

`#include <list.h>`

Inheritance diagram for LinkedList< T >:



Classes

- class iterator

  Iterator class.

- struct ListItem

  Linked list's item.

Public Member Functions

- LinkedList (void)

  Constructor sets the pivot elements.

- ~LinkedList (void)
- void insert (const T &data)

  Inserts one item in the linked list.

- void remove (const T &data)

  Removes one element from linked list.

- void deleteall (void)

  Deletes all element in linked list, except pivot item.

- iterator begin (void)
- iterator end (void)
- void print (void)

  Prints the list to standard output.

Protected Attributes

- ListItem * firstItem
- ListItem * endItem

Friends

- class LinkedList< T >::iterator

5.5.1 Detailed Description

template<typename T> class LinkedList< T >

Linked list class. Simple sorted linked list class.

5.5.2 Constructor & Destructor Documentation

5.5.2.1 template<typename T > LinkedList< T >::LinkedList (void) [inline]

Constructor sets the pivot elements.

5.5.2.2 template<typename T > LinkedList< T >::~LinkedList (void) [inline]

5.5.3 Member Function Documentation

5.5.3.1 template<typename T > LinkedList< T >::iterator LinkedList< T >::begin (void) [inline]

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.3.2 template<typename T > void LinkedList< T >::deleteall (void) [inline]

Deletes all element in linked list, except pivot item.

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.3.3 template<typename T > LinkedList< T >::iterator LinkedList< T >::end (void) [inline]

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.3.4 template<typename T> void LinkedList< T >::insert (const T & *data*) [inline]

Inserts one item in the linked list.

Parameters

data Value of the new item.

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.3.5 template<typename T > void LinkedList< T >::print (void) [inline]

Prints the list to standard output.

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.3.6 template<typename T> void LinkedList< T >::remove (const T & *data*) [inline]

Removes one element from linked list.

Parameters

data Value of the deleted item

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.4 Friends And Related Function Documentation

5.5.4.1 template<typename T> friend class LinkedList< T >::iterator [friend]

5.5.5 Member Data Documentation

5.5.5.1 template<typename T> ListItem* LinkedList< T >::endItem [protected]

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

5.5.5.2 template<typename T> ListItem* LinkedList< T >::firstItem [protected]

Reimplemented in RootLinkedList< R, T >, MainLinkedList< R, S, T >, RootLinkedList< R, S >, and RootLinkedList< S, T >.

The documentation for this class was generated from the following files:

- list.h
- list.hpp

5.6 ListException Class Reference

`#include <list.h>`

Public Member Functions

- ListException (const char *err_)
- ~ListException ()
- virtual const char * what () const

5.6.1 Constructor & Destructor Documentation

5.6.1.1 ListException::ListException (const char * *err_*) [inline]

5.6.1.2 ListException::~ListException () [inline]

5.6.2 Member Function Documentation

5.6.2.1 virtual const char* ListException::what () const [inline, virtual]

The documentation for this class was generated from the following file:

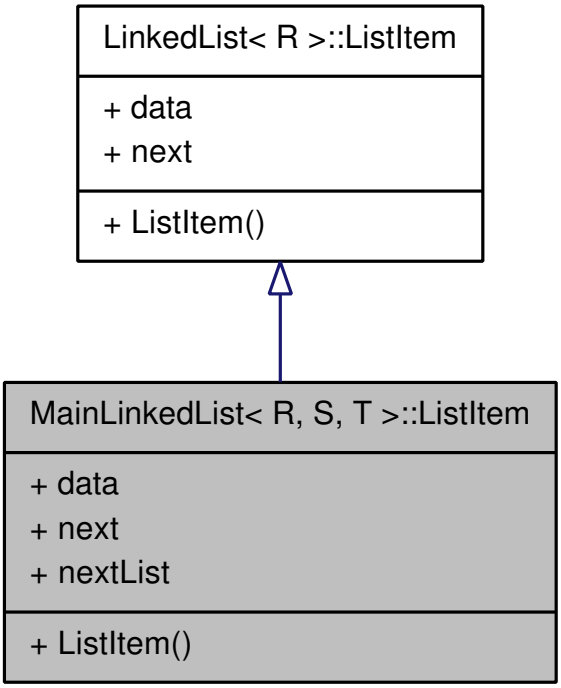
- list.h

5.7 MainLinkedList< R, S, T >::ListItem Struct Reference

Three-level Linked list's item.

`#include <list.h>`

Inheritance diagram for MainLinkedList< R, S, T >::ListItem:



Public Member Functions

- ListItem (ListItem *item=0)

Public Attributes

- R data
- ListItem * next
- RootLinkedList< S, T > * nextList

5.7.1 Detailed Description

template<class R, class S, class T> struct MainLinkedList< R, S, T >::ListItem

Three-level Linked list's item.

5.7.2 Constructor & Destructor Documentation

5.7.2.1 template<class R , class S , class T > MainLinkedList< R, S, T >::ListItem::ListItem (ListItem * *item* = 0) [inline]

5.7.3 Member Data Documentation

5.7.3.1 template<class R , class S , class T > R MainLinkedList< R, S, T >::ListItem::data

Reimplemented from LinkedList< T >::ListItem.

5.7.3.2 template<class R , class S , class T > ListItem* MainLinkedList< R, S, T >::ListItem::next

Reimplemented from LinkedList< T >::ListItem.

5.7.3.3 template<class R , class S , class T > RootLinkedList<S, T>* MainLinkedList< R, S, T >::ListItem::nextList

The documentation for this struct was generated from the following file:

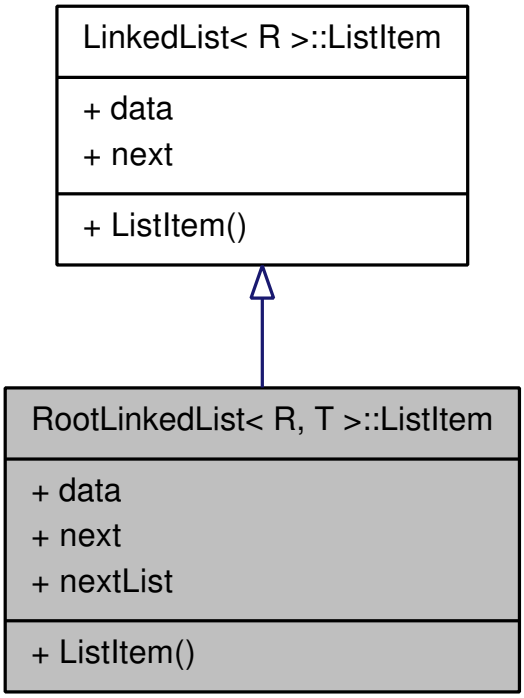
- list.h

5.8 RootLinkedList< R, T >::ListItem Struct Reference

Root Linked list's item.

`#include <list.h>`

Inheritance diagram for RootLinkedList< R, T >::ListItem:



Public Member Functions

- ListItem (ListItem *item=0)

Public Attributes

- R data
- ListItem * next
- LinkedList< T > * nextList

5.8.1 Detailed Description

template<typename R, typename T> struct RootLinkedList< R, T >::ListItem

Root Linked list's item.

5.8.2 Constructor & Destructor Documentation

5.8.2.1 template<typename R, typename T> RootLinkedList< R, T >::ListItem::ListItem (ListItem * *item* = 0) [inline]

5.8.3 Member Data Documentation

5.8.3.1 template<typename R, typename T> R RootLinkedList< R, T >::ListItem::data

Reimplemented from LinkedList< T >::ListItem.

5.8.3.2 template<typename R, typename T> ListItem* RootLinkedList< R, T >::ListItem::next

Reimplemented from LinkedList< T >::ListItem.

5.8.3.3 template<typename R, typename T> LinkedList<T>* RootLinkedList< R, T >::ListItem::nextList

The documentation for this struct was generated from the following file:

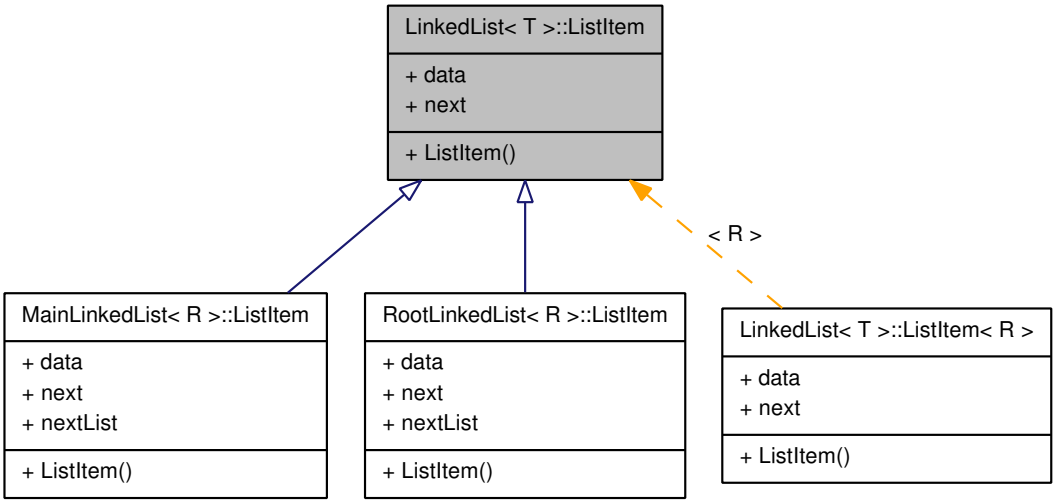
- list.h

5.9 LinkedList< T >::ListItem Struct Reference

Linked list's item.

`#include <list.h>`

Inheritance diagram for LinkedList< T >::ListItem:



Public Member Functions

- ListItem (ListItem *item=0)

Public Attributes

- T data
- ListItem * next

5.9.1 Detailed Description

template<typename T> struct LinkedList< T >::ListItem

Linked list's item.

5.9.2 Constructor & Destructor Documentation

5.9.2.1 template<typename T> LinkedList< T >::ListItem::ListItem (ListItem * *item* = 0) [inline]

5.9.3 Member Data Documentation

5.9.3.1 template<typename T> T LinkedList< T >::ListItem::data

Reimplemented in RootLinkedList< R, T >::ListItem, and MainLinkedList< R, S, T >::ListItem.

5.9.3.2 template<typename T> ListItem* LinkedList< T >::ListItem::next

Reimplemented in RootLinkedList< R, T >::ListItem, and MainLinkedList< R, S, T >::ListItem.

The documentation for this struct was generated from the following file:

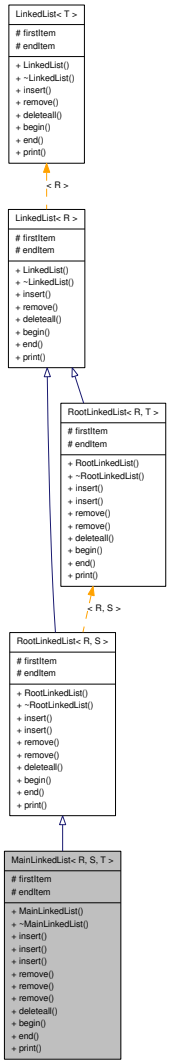
- list.h

5.10 MainLinkedList< R, S, T > Class Template Reference

Three-level linked list.

`#include <list.h>`

Inheritance diagram for MainLinkedList< R, S, T >:



Classes

- class iterator

  Iterator class.

- struct ListItem

  Three-level Linked list's item.

Public Member Functions

- MainLinkedList (void)
- ~MainLinkedList (void)
- void insert (const R &r_data)
- void insert (const R &r_data, const S &S_data)
- void insert (const R &r_data, const S &S_data, const T &T_data)
- void remove (const R &data)
- void remove (const R &r_data, const S &t_data)
- void remove (const R &r_data, const S &S_data, const T &T_data)
- void deleteall (void)
- iterator begin (void)
- iterator end (void)
- void print (void)

Protected Attributes

- ListItem * firstItem
- ListItem * endItem

Friends

- class MainLinkedList< R, S, T >::iterator

5.10.1 Detailed Description

template<class R, class S, class T> class MainLinkedList< R, S, T >

Three-level linked list.

5.10.2 Constructor & Destructor Documentation

5.10.2.1 template<typename R , typename S , typename T > MainLinkedList< R, S, T >::MainLinkedList (void) [inline]

5.10.2.2 template<typename R , typename S , typename T > MainLinkedList< R, S, T >::~MainLinkedList (void) [inline]

5.10.3 Member Function Documentation

5.10.3.1 template<typename R , typename S , typename T > MainLinkedList< R, S, T >::iterator MainLinkedList< R, S, T >::begin (void) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.2 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::deleteall (void) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.3 template<typename R , typename S , typename T > MainLinkedList< R, S, T >::iterator MainLinkedList< R, S, T >::end (void) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.4 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::insert (const R & *r_data*, const S & *S_data*, const T & *T_data*) [inline]

5.10.3.5 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::insert (const R & *r_data*, const S & *S_data*) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.6 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::insert (const R & *r_data*) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.7 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::print (void) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.8 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::remove (const R & *r_data*, const S & *S_data*, const T & *T_data*) [inline]

5.10.3.9 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::remove (const R & *r_data*, const S & *t_data*) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.3.10 template<typename R , typename S , typename T > void MainLinkedList< R, S, T >::remove (const R & *data*) [inline]

Reimplemented from RootLinkedList< R, S >.

5.10.4 Friends And Related Function Documentation

5.10.4.1 template<class R , class S , class T > friend class MainLinkedList< R, S, T >::iterator [friend]

5.10.5 Member Data Documentation

5.10.5.1 template<class R , class S , class T > ListItem* MainLinkedList< R, S, T >::endItem [protected]

Reimplemented from RootLinkedList< R, S >.

5.10.5.2 template<class R , class S , class T > ListItem* MainLinkedList< R, S, T >::firstItem [protected]

Reimplemented from RootLinkedList< R, S >.

The documentation for this class was generated from the following files:

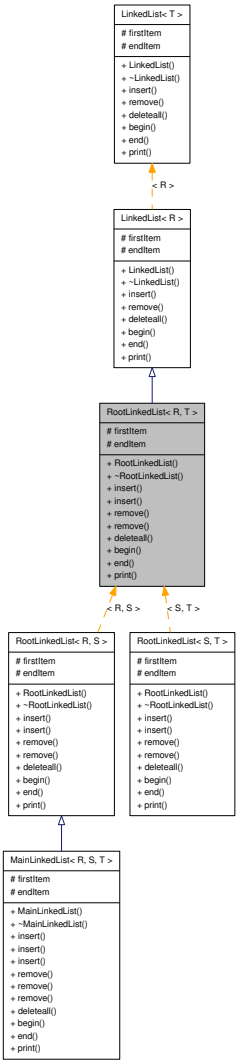
- list.h
- list.hpp

5.11 RootLinkedList< R, T > Class Template Reference

2 level Root Linked List. Each list item has one child list.

`#include <list.h>`

Inheritance diagram for RootLinkedList< R, T >:



Classes

- class iterator

  Iterator class.

- struct ListItem

  Root Linked list's item.

Public Member Functions

- RootLinkedList (void)

  Constructor sets pivot elements.

- ~RootLinkedList (void)
- void insert (const R &r_data)

  Inserts an element into the list.

- void insert (const R &r_data, const T &t_data)

  Inserts one element in the containing list.

- void remove (const R &data)
- void remove (const R &r_data, const T &t_data)
- void deleteall (void)
- iterator begin (void)
- iterator end (void)
- void print (void)

Protected Attributes

- ListItem * firstItem
- ListItem * endItem

Friends

- class RootLinkedList< R, T >::iterator

5.11.1 Detailed Description

template<typename R, typename T> class RootLinkedList< R, T >

2 level Root Linked List. Each list item has one child list.

5.11.2 Constructor & Destructor Documentation

5.11.2.1 template<typename R , typename T > RootLinkedList< R, T >::RootLinkedList (void) [inline]

Constructor sets pivot elements.

5.11.2.2 template<typename R , typename T > RootLinkedList< R, T >::~RootLinkedList (void) [inline]

5.11.3 Member Function Documentation

5.11.3.1 template<typename R , typename T > RootLinkedList< R, T >::iterator RootLinkedList< R, T >::begin (void) [inline]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.2 template<typename R , typename T > void RootLinkedList< R, T >::deleteall (void) [inline]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.3 template<typename R , typename T > RootLinkedList< R, T >::iterator RootLinkedList< R, T >::end (void) [inline]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.4 template<typename R, typename T> void RootLinkedList< R, T >::insert (const R & *r_data*, const T & *t_data*) [inline]

Inserts one element in the containing list.

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.5 template<typename R, typename T > void RootLinkedList< R, T >::insert (const R & *data*) [inline]

Inserts an element into the list.

Parameters

data Value of the new item

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.6 template<typename R , typename T > void RootLinkedList< R, T >::print (void) [inline]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.7 template<typename R, typename T> void RootLinkedList< R, T >::remove (const R & *r_data*, const T & *t_data*) [inline]

Reimplemented in MainLinkedList< R, S, T >.

5.11.3.8 template<typename R, typename T > void RootLinkedList< R, T >::remove (const R & *data*) [inline]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.4 Friends And Related Function Documentation

5.11.4.1 template<typename R, typename T> friend class RootLinkedList< R, T >::iterator [friend]

5.11.5 Member Data Documentation

5.11.5.1 template<typename R, typename T> ListItem* RootLinkedList< R, T >::endItem [protected]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

5.11.5.2 template<typename R, typename T> ListItem* RootLinkedList< R, T >::firstItem [protected]

Reimplemented from LinkedList< R >.

Reimplemented in MainLinkedList< R, S, T >.

The documentation for this class was generated from the following files:

- list.h
- list.hpp

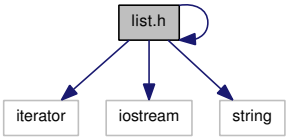
Chapter 6

File Documentation

6.1 list.h File Reference

```
#include <iterator>
#include <iostream>
#include <string>
#include "list.hpp"
```

Include dependency graph for list.h:



This graph shows which files directly or indirectly include this file:

Classes

- class Cmp< T >

  Compare template class. Compare class containing 2 predicate functions (equals, less than) In some cases specialization is needed.

- class LinkedList< T >

  Linked list class. Simple sorted linked list class.

- struct LinkedList< T >::ListItem

  Linked list's item.

- class LinkedList< T >::iterator

  Iterator class.

- class RootLinkedList< R, T >

  2 level Root Linked List. Each list item has one child list.

- struct RootLinkedList< R, T >::ListItem

  Root Linked list's item.

- class RootLinkedList< R, T >::iterator

  Iterator class.

- class MainLinkedList< R, S, T >

  Three-level linked list.

- struct MainLinkedList< R, S, T >::ListItem

  Three-level Linked list's item.

- class MainLinkedList< R, S, T >::iterator

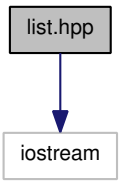
  Iterator class.

- class ListException

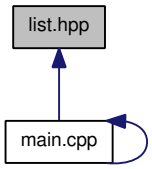
6.2 list.hpp File Reference

```
#include <iostream>
```

Include dependency graph for list.hpp:



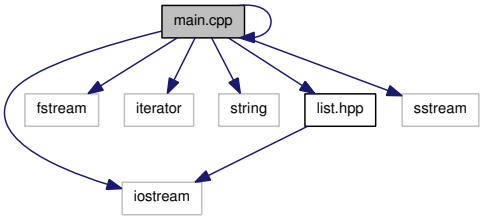
This graph shows which files directly or indirectly include this file:



6.3 main.cpp File Reference

```
#include <iostream>
#include <fstream>
#include "list.h"
#include <iterator>
#include <string>
#include "list.hpp"
#include <sstream>
```

Include dependency graph for main.cpp:



This graph shows which files directly or indirectly include this file:

Functions

- int main (void)

6.3.1 Function Documentation

6.3.1.1 int main (void)

Index