LinkedList

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Chapter 1

File Index

1.1 File List

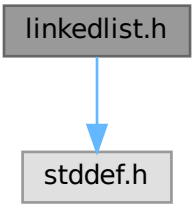
Here is a list of all files with brief descriptions:

Chapter 2

File Documentation

2.1 linkedlist.h File Reference

`#include <stddef.h>`
Include dependency graph for linkedlist.h:



Typedefs

- typedef struct LinkedList ∗ LinkedList

Functions

- LinkedList ll_create (size_t value_size)

  Creates a new LinkedList.
- int ll_push (LinkedList ll, const void ∗data)

  Pushes a new value on the Stack.
- int ll_add (LinkedList ll, const void ∗data)

  Adds a new value to the LinkedList.
- void ∗ ll_pop (LinkedList ll)

  Pops the first value from the Stack. Asserts that the Stack is not empty.
- void ∗ ll_poll (LinkedList ll)

  Polls the first value from the Stack. If the Stack is empty NULL is returned.

- void * ll_remove (LinkedList ll, size_t index)

  Removes an item from the LinkedList.
- void * ll_peek (LinkedList ll)

  Returns the first item on the Stack.
- void * ll_peek_last (LinkedList ll)

  Returns the last item on the Stack.
- void * ll_get (LinkedList ll, size_t index)

  Gets the item at the index.
- int ll_length (LinkedList ll)

  Returns the length of the LinkedList.
- int ll_destroy (LinkedList ll)

  Destroys the LinkedList.

2.1.1 Typedef Documentation

2.1.1.1 LinkedList

```
typedef struct LinkedList* LinkedList
```

2.1.2 Function Documentation

2.1.2.1 ll_add()

```
int ll_add (
            LinkedList ll,
            const void * data )
```

Adds a new value to the LinkedList.

Parameters

ll	The LinkedList
data	The data to be added

Returns

Success code

2.1.2.2 ll_create()

```
LinkedList ll_create (
            size_t value_size )
```

Creates a new LinkedList.

Parameters

value_size	The sizeof value of the value

Returns

LinkedList

2.1.2.3 ll_destroy()

```
int ll_destroy (
            LinkedList ll )
```

Destroys the LinkedList.

Parameters

ll	The LinkedList

Returns

Sucess code

2.1.2.4 ll_get()

```
void * ll_get (
            LinkedList ll,
            size_t index )
```

Gets the item at the index.

Parameters

ll	The LinkedList
index	index of the value

Returns

The item

2.1.2.5 ll_length()

```
int ll_length (
            LinkedList ll )
```

Returns the length of the LinkedList.

Parameters

ll	The LinkedList

Returns

The length

2.1.2.6 ll_peek()

```
void * ll_peek (
            LinkedList ll )
```

Returns the first item on the Stack.

Parameters

ll	The LinkedList

Returns

The first value

2.1.2.7 ll_peek_last()

```
void * ll_peek_last (
            LinkedList ll )
```

Returns the last item on the Stack.

Parameters

ll	The LinkedList

Returns

The last value

2.1.2.8 ll_poll()

```
void * ll_poll (
            LinkedList ll )
```

Polls the first value from the Stack. If the Stack is empty NULL is returned.

Parameters

ll	The LinkedList

Returns

The polled value

2.1.2.9 ll_pop()

```
void * ll_pop (
            LinkedList ll )
```

Pops the first value from the Stack. Asserts that the Stack is not empty.

Parameters

ll	The LinkedList

Returns

The popped value

2.1.2.10 ll_push()

```
int ll_push (
            LinkedList ll,
            const void * data )
```

Pushes a new value on the Stack.

Parameters

data	The data to be pushed

Returns

Success code

2.1.2.11 ll_remove()

```
void * ll_remove (
            LinkedList ll,
            size_t index )
```

Removes an item from the LinkedList.

Parameters

ll	The LinkedList
index	The index from which an item should be removed

Returns

The removed value

2.2 linkedlist.h

Go to the documentation of this file.

```
00001 //
00002 // Created by Emanuel on 07.09.2024.
00003 //
00004
00005 #ifndef LINKEDLIST_H
00006 #define LINKEDLIST_H
00007
00008 #include <stddef.h>
00009
00010
00011 typedef struct LinkedList *LinkedList;
00012
00013
00020 LinkedList ll_create(size_t value_size);
00021
00028 int ll_push(LinkedList ll, const void *data);
00029
00037 int ll_add(LinkedList ll, const void *data);
00038
00045 void *ll_pop(LinkedList ll);
00046
00053 void *ll_poll(LinkedList ll);
00054
00062 void *ll_remove(LinkedList ll, size_t index);
00063
00070 void *ll_peek(LinkedList ll);
00071
00078 void *ll_peek_last(LinkedList ll);
00079
00087 void *ll_get(LinkedList ll, size_t index);
00088
00095 int ll_length(LinkedList ll);
00096
00103 int ll_destroy(LinkedList ll);
00104
00105
00106 #endif //LINKEDLIST_H
```

Index