C Data Structures

0.1

Generated by Doxygen 1.8.20

Mon Nov 2 2020 23:10:59

1 Data Structure Index	1
1.1 Data Structures	1
2 File Index	1
2.1 File List	1
3 Data Structure Documentation	2
3.1 list Struct Reference	2
3.1.1 Detailed Description	3
3.1.2 Field Documentation	3
3.2 list_node Struct Reference	3
3.2.1 Detailed Description	4
3.2.2 Field Documentation	4
3.3 queue Struct Reference	4
3.3.1 Detailed Description	5
3.3.2 Field Documentation	5
3.4 queue_node Struct Reference	5
3.4.1 Detailed Description	6
3.4.2 Field Documentation	6
3.5 stack_node Struct Reference	6
3.5.1 Detailed Description	7
3.5.2 Field Documentation	7
3.6 test_rate Struct Reference	7
3.6.1 Field Documentation	7
3.7 test_section Struct Reference	8
3.7.1 Field Documentation	8
4 File Documentation	9
4.1 include/data-structures/list.h File Reference	9
4.1.1 Detailed Description	10
4.1.2 Function Documentation	10
4.2 include/data-structures/queue.h File Reference	13
4.2.1 Detailed Description	14
4.2.2 Function Documentation	15
4.3 include/data-structures/stack.h File Reference	17
4.3.1 Detailed Description	18
4.3.2 Function Documentation	18
4.4 include/specifiers/specifier-list-string.h File Reference	19
4.4.1 Detailed Description	20
4.4.2 Function Documentation	21
4.5 src/data-structures/list.c File Reference	22
4.5.1 Function Documentation	23
4.6 src/data-structures/queue.c File Reference	26

1 Data Structure Index 1

	27
4.7 src/data-structures/stack.c File Reference	29
4.7.1 Function Documentation	30
4.8 src/specifiers/specifier-list-string.c File Reference	31
4.8.1 Function Documentation	32
4.9 test/test-list.c File Reference	33
4.9.1 Function Documentation	33
4.10 test/test-queue.c File Reference	33
4.10.1 Function Documentation	34
4.11 test/test-specifier-list-string.c File Reference	34
4.11.1 Function Documentation	35
4.12 test/test-stack.c File Reference	35
4.12.1 Function Documentation	35
4.13 test/test-suite.c File Reference	36
4.13.1 Macro Definition Documentation	36
4.13.2 Function Documentation	37
4.14 test/test-suite.h File Reference	37
4.14.1 Function Documentation	38
Index 1 Data Structure Index	39
i Data Structure index	
1.1 Data Structures	
1.1 Data Structures Here are the data structures with brief descriptions:	
	2
Here are the data structures with brief descriptions:	2
Here are the data structures with brief descriptions: list Structure for a list contaning le size and first element of the list list_node	
Here are the data structures with brief descriptions: list Structure for a list contaning le size and first element of the list list_node Structure for a list node contaning the value and the next/prev node pointer queue	3
Here are the data structures with brief descriptions: list Structure for a list containing le size and first element of the list list_node Structure for a list node containing the value and the next/prev node pointer queue Structure for a queue containing le size, head and tail element of the queue queue_node	3
Here are the data structures with brief descriptions: list Structure for a list containing le size and first element of the list list_node Structure for a list node containing the value and the next/prev node pointer queue Structure for a queue containing le size, head and tail element of the queue queue_node Structure for a queue_node containing the value and the next/prev node pointer stack_node	3 4 5 6
Here are the data structures with brief descriptions: list Structure for a list contaning le size and first element of the list list_node Structure for a list node contaning the value and the next/prev node pointer queue Structure for a queue contaning le size, head and tail element of the queue queue_node Structure for a queue_node contaning the value and the next/prev node pointer stack_node test_rate	3 4
Here are the data structures with brief descriptions: list Structure for a list containing le size and first element of the list list_node Structure for a list node containing the value and the next/prev node pointer queue Structure for a queue containing le size, head and tail element of the queue queue_node Structure for a queue_node containing the value and the next/prev node pointer stack_node	3 4 5 6

2 File Index

2.1 File List

Here is a list of all files with brief descriptions:

include/data-structures/list.h	
List data structure file	9
include/data-structures/queue.h	
Queue data structure file	13
include/data-structures/stack.h	
Stack data structure file	17
include/specifiers/specifier-list-string.h	
List data structure specifier for string values	19
src/data-structures/list.c	22
src/data-structures/queue.c	26
•	
src/data-structures/stack.c	29
src/specifiers/specifier-list-string.c	31
test/test-list.c	33
test/test-queue.c	33
test/test-specifier-list-string.c	34
test/test-stack.c	35
test/test-suite.c	36
test/test-suite h	37

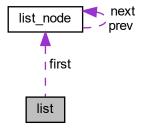
3 Data Structure Documentation

3.1 list Struct Reference

Structure for a list contaning le size and first element of the list.

#include <list.h>

Collaboration diagram for list:



- unsigned size
- struct list_node * first

3.1.1 Detailed Description

Structure for a list contaning le size and first element of the list.

3.1.2 Field Documentation

```
3.1.2.1 first struct list_node* list::first
```

pointer to the first node of the list

3.1.2.2 **size** unsigned list::size

size of the list

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

• include/data-structures/list.h

3.2 list_node Struct Reference

Structure for a list node contaning the value and the next/prev node pointer.

```
#include <list.h>
```

Collaboration diagram for list_node:



Data Fields

- void * val
- struct list_node * next
- struct list_node * prev

3.2.1 Detailed Description

Structure for a list node contaning the value and the next/prev node pointer.

3.2.2 Field Documentation

```
3.2.2.1 next struct list_node* list_node::next
pointer to the next node
```

```
3.2.2.2 prev struct list_node* list_node::prev
```

pointer to the previous node

```
3.2.2.3 val void* list_node::val
```

pointer to the value

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

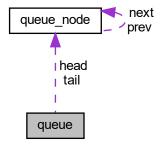
• include/data-structures/list.h

3.3 queue Struct Reference

Structure for a queue contaning le size, head and tail element of the queue.

```
#include <queue.h>
```

Collaboration diagram for queue:



- unsigned size
- struct queue_node * head
- struct queue_node * tail

3.3.1 Detailed Description

Structure for a queue contaning le size, head and tail element of the queue.

3.3.2 Field Documentation

```
3.3.2.1 head struct queue_node* queue::head
```

pointer to the head node of the queue

```
3.3.2.2 size unsigned queue::size
```

size of the queue

```
3.3.2.3 tail struct queue_node* queue::tail
```

pointer to the tail node of the queue

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

• include/data-structures/queue.h

3.4 queue_node Struct Reference

Structure for a queue_node contaning the value and the next/prev node pointer.

```
#include <queue.h>
```

Collaboration diagram for queue_node:



- void * val
- struct queue_node * next
- struct queue_node * prev

3.4.1 Detailed Description

Structure for a queue_node containing the value and the next/prev node pointer.

3.4.2 Field Documentation

```
3.4.2.1 next struct queue_node* queue_node::next
```

pointer to the next node

```
3.4.2.2 prev struct queue_node* queue_node::prev
```

pointer to the previous node

```
3.4.2.3 val void* queue_node::val
```

pointer to the value

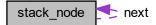
The documentation for this struct was generated from the following file:

• include/data-structures/queue.h

3.5 stack_node Struct Reference

```
#include <stack.h>
```

Collaboration diagram for stack_node:



- void * val
- struct stack node * next

3.5.1 Detailed Description

Structure for a stack node contaning the value and the next node pointer.

3.5.2 Field Documentation

```
3.5.2.1 next struct stack_node* stack_node::next
```

pointer to the next node

```
3.5.2.2 val void* stack_node::val
```

pointer to the value

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

• include/data-structures/stack.h

3.6 test_rate Struct Reference

```
#include <test-suite.h>
```

Data Fields

- unsigned number_test
- unsigned number_success

3.6.1 Field Documentation

3.6.1.1 number_success unsigned test_rate::number_success

3.6.1.2 number_test unsigned test_rate::number_test

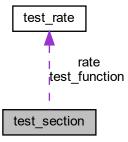
The documentation for this struct was generated from the following file:

· test/test-suite.h

3.7 test_section Struct Reference

```
#include <test-suite.h>
```

Collaboration diagram for test_section:



Data Fields

- char * name
- struct test_rate(* test_function)(void)
- struct test_rate rate

3.7.1 Field Documentation

3.7.1.1 name char* test_section::name

3.7.1.2 rate struct test_rate test_section::rate

4 File Documentation 9

3.7.1.3 test_function struct test_rate(* test_section::test_function) (void)

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

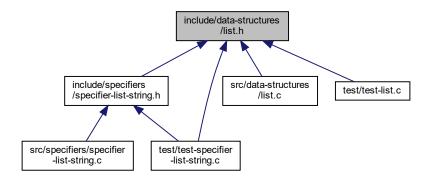
· test/test-suite.h

4 File Documentation

4.1 include/data-structures/list.h File Reference

List data structure file.

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



Data Structures

struct list_node

Structure for a list node contaning the value and the next/prev node pointer.

struct list

Structure for a list contaning le size and first element of the list.

Functions

void list_init (struct list *list)

Initiate the list structure with default values

No allocation is done here

• unsigned list size (struct list *list)

Get the size of the list.

int list_isEmpty (struct list *list)

Check whether the list is empty.

void list_append (struct list *list, struct list_node *node)

Append a node to a list.

void list_prepend (struct list *list, struct list_node *node)

Prepend a node to a list.

struct list_node * list_popleft (struct list *list)

Pop the left node of a list

No free is done here

• struct list_node * list_popright (struct list *list)

Pop the right node of a list

No free is done here

struct list_node * list_get (struct list *list, unsigned index)

Get a node from a list.

int list_insert (struct list *list, struct list_node *node, unsigned index)

Insert a node at an index of a list.

• struct list_node * list_remove (struct list *list, unsigned index)

Remove a node from a list

No free is done here

4.1.1 Detailed Description

List data structure file.

Author

```
Sébastien Goubeau ( sebastien.goubeau@protonmail.com)
```

Containes all the functions and structures needed to manipulate the list data structure.

4.1.2 Function Documentation

Append a node to a list.

Parameters

list	List to append from
node	Node to append

Get a node from a list.

list	List from which to get the node from
index	Index of the node to fetch from the left

Returns

Node's pointer

Initiate the **list** structure with default values **No allocation is done here**

Parameters

```
list List structure
```

Insert a node at an index of a list.

Parameters

list	List from which to insert to
node	Node to insert
index	Index of the new node in the list

Returns

true (1) if the node has been inserted, false (0) otherwise. The function returns false if the index is greater than the list's size.

Check whether the list is empty.

list List of which to check emptiness

Returns

true (1) if the list is empty, false (0) otherwise

Pop the left node of a list

No free is done here

Parameters

list List from which to pop from

Returns

The node that just been poped

4.1.2.7 list_popright() struct list_node* list_popright (struct list * list)

Pop the right node of a list

No free is done here

Parameters

list List from which to pop from

Returns

The node that just been poped

Prepend a node to a list.

list	List to prepend from
node	Node to prepend

Remove a node from a list

No free is done here

Parameters

list	List from which to remove from
index	Index of the node to remove

Returns

The node that just been removed. The function returns NULL if the index is greater or equal to the list's size.

```
4.1.2.10 list_size() unsigned list_size ( struct list * list )
```

Get the size of the list.

Parameters

list List of which to get the size	from
------------------------------------	------

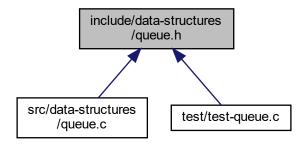
Returns

Size of the list list

4.2 include/data-structures/queue.h File Reference

Queue data structure file.

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



Data Structures

• struct queue node

Structure for a queue_node contaning the value and the next/prev node pointer.

· struct queue

Structure for a queue contaning le size, head and tail element of the queue.

Functions

void queue init (struct queue *q)

Initiate the **queue** structure with default values **No allocation is done here**

• unsigned queue_size (struct queue *q)

Get the size of the queue.

int queue_isEmpty (struct queue *q)

Check whether the queue is empty.

void queue_enqueue (struct queue *q, struct queue_node *n)

Enqueue a node to a queue.

• struct queue_node * queue_dequeue (struct queue *q)

Dequeue a node from a queue

No free is done here

4.2.1 Detailed Description

Queue data structure file.

Author

Sébastien Goubeau (sebastien.goubeau@protonmail.com)

Containes all the functions and structures needed to manipulate the queue data structure.

4.2.2 Function Documentation

```
4.2.2.1 queue_dequeue() struct queue_node* queue_dequeue ( struct queue * q )
```

Dequeue a node from a queue

No free is done here

Parameters

q Queue to dequeue from

Returns

The node that just been dequeued. Returns NULL if the queue is empty.

```
4.2.2.2 queue_enqueue() void queue_enqueue ( struct queue * q, struct queue_node * n )
```

Enqueue a node to a queue.

Parameters

q	Queue to enqueue from
n	Node to enqueue

```
4.2.2.3 queue_init() void queue_init ( struct queue * q )
```

Initiate the queue structure with default values

No allocation is done here

Parameters

q Queue structure

```
4.2.2.4 queue_isEmpty() int queue_isEmpty ( struct queue * q )
```

Check whether the queue is empty.

q Queue of which to check emptiness

Returns

true (1) if the queue is empty, false (0) otherwise

```
4.2.2.5 queue_size() unsigned queue_size ( struct queue * q)
```

Get the size of the queue.

Parameters

q | Queue of which to get the size from

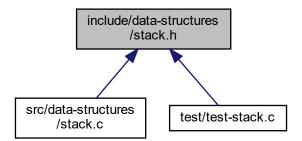
Returns

Size of the queue queue

4.3 include/data-structures/stack.h File Reference

Stack data structure file.

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



Data Structures

struct stack_node

Functions

void stack_initStack (struct stack_node *stack)

Initiate the stack structure with default vales

No allocation is done here

int stack_isStackEmpty (struct stack_node *stack)

Check whether the stack is empty.

• void stack_push (struct stack_node *stack, struct stack_node *node)

Push a node on top of the stack.

struct stack_node * stack_pop (struct stack_node *stack)

Pop the node on top of the stack

No free is done here

4.3.1 Detailed Description

Stack data structure file.

Author

```
Sébastien Goubeau ( sebastien.goubeau@protonmail.com)
```

Containes all the functions and structures needed to manipulate the stack data structure.

4.3.2 Function Documentation

```
4.3.2.1 stack_initStack() void stack_initStack ( struct stack_node * stack )
```

Initiate the **stack** structure with default vales **No allocation is done here**

Parameters

```
stack Top node of the stack
```

The first node of the stack can be considered the stack it self in this implementation.

```
4.3.2.2 stack_isStackEmpty() int stack_isStackEmpty ( struct stack_node * stack )
```

Check whether the stack is empty.

Parameters

stack	Top node of the stack

Returns

true (1) if the **stack** is empty, false (0) otherwise

Pop the node on top of the stack

No free is done here

Parameters

stack	Top node of the stack
-------	-----------------------

Returns

The node that just been poped

Push a node on top of the stack.

Parameters

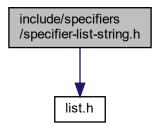
stack	Top node of the stack
node	Node to push

4.4 include/specifiers/specifier-list-string.h File Reference

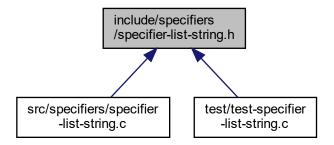
List data structure specifier for string values.

```
#include "list.h"
```

Include dependency graph for specifier-list-string.h:



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



Functions

- struct list_node * list_string_alloc_node (const char *str)
 - Allocate a new node with the string str value.
- void list_string_free_node (struct list_node *node)
 - Free a string node.
- char * list_string_read_node (struct list_node *node)
 - Reads the string value in a string node.
- int list string equal (void *left, void *right)

4.4.1 Detailed Description

List data structure specifier for string values.

Author

Sébastien Goubeau (sebastien.goubeau@protonmail.com)

Containes all the functions to allocate a list node, free it, read a string from it or compare it.

4.4.2 Function Documentation

```
4.4.2.1 list_string_alloc_node() struct list_node* list_string_alloc_node ( const char * str )
```

Allocate a new node with the string **str** value.

Parameters

str String to copy in the node

Returns

The just allocated node

There are two allocation here, one for the list_node structure and one for the str argument.

```
4.4.2.2 list_string_equal() int list_string_equal ( void * left, void * right )
```

```
4.4.2.3 list_string_free_node() void list_string_free_node ( struct list_node * node )
```

Free a string node.

Parameters

node The node to free

There are two free done here, one for the list_node structure and one for the value (string) of the node.

```
4.4.2.4 list_string_read_node() char* list_string_read_node ( struct list_node * node )
```

Reads the string value in a string node.

Parameters

node Node to read from

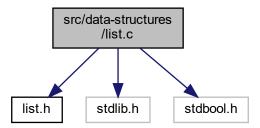
Returns

The pointer to the string in the node

The pointer returned is from the node it self, no copy is done here.

4.5 src/data-structures/list.c File Reference

```
#include "list.h"
#include <stdlib.h>
#include <stdbool.h>
Include dependency graph for list.c:
```



Functions

void list_init (struct list *list)

Initiate the list structure with default values

No allocation is done here

unsigned list_size (struct list *list)

Get the size of the list.

int list isEmpty (struct list *list)

Check whether the list is empty.

- void list_hard_append (struct list *list, struct list_node *node)
- void list_append (struct list *list, struct list_node *node)

Append a node to a list.

void list_prepend (struct list *list, struct list_node *node)

Prepend a node to a list.

- struct list_node * list_hard_remove (struct list *list, struct list_node *node)
- struct list_node * list_popleft (struct list *list)

Pop the left node of a list

No free is done here

struct list node * list popright (struct list *list)

Pop the right node of a list

No free is done here

struct list_node * list_get (struct list *list, unsigned index)

Get a node from a list.

• int list_insert (struct list *list, struct list_node *node, unsigned index)

Insert a node at an index of a list.

struct list_node * list_remove (struct list *list, unsigned index)

Remove a node from a list

No free is done here

4.5.1 Function Documentation

Append a node to a list.

Parameters

list	List to append from
node	Node to append

Get a node from a list.

Parameters

list	List from which to get the node from
index	Index of the node to fetch from the left

Returns

Node's pointer

```
4.5.1.5 list_init() void list_init ( struct list * list )
```

Initiate the list structure with default values

No allocation is done here

list	List structure
------	----------------

Insert a node at an index of a list.

Parameters

list	List from which to insert to
node	Node to insert
index	Index of the new node in the list

Returns

true (1) if the node has been inserted, false (0) otherwise. The function returns false if the index is greater than the list's size.

4.5.1.7 list_isEmpty() int list_isEmpty (struct list * list)

Check whether the list is empty.

Parameters

list	List of which to check emptiness
------	----------------------------------

Returns

true (1) if the list is empty, false (0) otherwise

```
4.5.1.8 list_popleft() struct list_node* list_popleft ( struct list * list )
```

Pop the left node of a list

No free is done here

list	List from which to pop from
------	-----------------------------

Returns

The node that just been poped

```
4.5.1.9 list_popright() struct list_node* list_popright ( struct list * list )
```

Pop the right node of a list

No free is done here

Parameters

list List f	rom which to pop from
-------------	-----------------------

Returns

The node that just been poped

```
4.5.1.10 list_prepend() void list_prepend ( struct list * list, struct list_node * node )
```

Prepend a node to a list.

Parameters

list	List to prepend from
node	Node to prepend

Remove a node from a list

No free is done here

Parameters

list	List from which to remove from
index	Index of the node to remove

Returns

The node that just been removed. The function returns NULL if the index is greater or equal to the list's size.

```
4.5.1.12 list_size() unsigned list_size ( struct list * list )
```

Get the size of the list.

Parameters

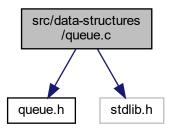
list	List of which to get the size from
------	------------------------------------

Returns

Size of the list list

4.6 src/data-structures/queue.c File Reference

```
#include "queue.h"
#include <stdlib.h>
Include dependency graph for queue.c:
```



Functions

void queue_init (struct queue *q)

Initiate the queue structure with default values

No allocation is done here

• unsigned queue_size (struct queue *q)

Get the size of the queue.

int queue_isEmpty (struct queue *q)

Check whether the queue is empty.

• void queue_enqueue (struct queue *q, struct queue_node *n)

Enqueue a node to a queue.

• struct queue_node * queue_dequeue (struct queue *q)

Dequeue a node from a queue

No free is done here

4.6.1 Function Documentation

```
4.6.1.1 queue_dequeue() struct queue_node* queue_dequeue ( struct queue * q )
```

Dequeue a node from a queue

No free is done here

Parameters

q Queue to dequeue from

Returns

The node that just been dequeued. Returns NULL if the queue is empty.

```
4.6.1.2 queue_enqueue() void queue_enqueue ( struct queue * q, struct queue_node * n )
```

Enqueue a node to a queue.

Parameters

q	Queue to enqueue from
n	Node to enqueue

```
4.6.1.3 queue_init() void queue_init ( struct queue * q )
```

Initiate the queue structure with default values

No allocation is done here

Parameters

```
q Queue structure
```

```
4.6.1.4 queue_isEmpty() int queue_isEmpty ( struct queue * q )
```

Check whether the queue is empty.

q Queue of which to check emptiness

Returns

true (1) if the queue is empty, false (0) otherwise

```
4.6.1.5 queue_size() unsigned queue_size ( struct queue * q)
```

Get the size of the queue.

Parameters

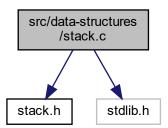
q | Queue of which to get the size from

Returns

Size of the queue queue

4.7 src/data-structures/stack.c File Reference

```
#include "stack.h"
#include <stdlib.h>
Include dependency graph for stack.c:
```



Functions

• void stack_initStack (struct stack_node *stack)

Initiate the **stack** structure with default vales

No allocation is done here

int stack_isStackEmpty (struct stack_node *stack)

Check whether the stack is empty.

• void stack_push (struct stack_node *stack, struct stack_node *node)

Push a node on top of the stack.

struct stack_node * stack_pop (struct stack_node *stack)

Pop the node on top of the stack

No free is done here

4.7.1 Function Documentation

Initiate the stack structure with default vales

No allocation is done here

Parameters

stack Top node of the stack

The first node of the stack can be considered the stack it self in this implementation.

```
4.7.1.2 stack_isStackEmpty() int stack_isStackEmpty ( struct stack_node * stack )
```

Check whether the stack is empty.

Parameters

stack	Top node of the stack
-------	-----------------------

Returns

true (1) if the **stack** is empty, false (0) otherwise

Pop the node on top of the stack

No free is done here

Parameters

stack Top node of the stack

Returns

The node that just been poped

Push a node on top of the stack.

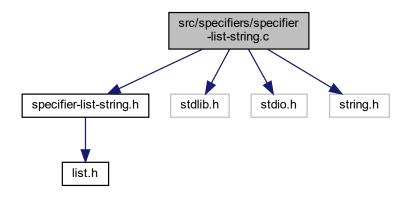
Parameters

stack	Top node of the stack
node	Node to push

4.8 src/specifiers/specifier-list-string.c File Reference

```
#include "specifier-list-string.h"
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
```

Include dependency graph for specifier-list-string.c:



Functions

- struct list_node * list_string_alloc_node (const char *str)
 - Allocate a new node with the string str value.
- void list_string_free_node (struct list_node *node)
 Free a string node.
- char * list_string_read_node (struct list_node *node)
 - Reads the string value in a string node.
- int list_string_equal (void *left, void *right)

4.8.1 Function Documentation

```
4.8.1.1 list_string_alloc_node() struct list_node* list_string_alloc_node ( const char * str )
```

Allocate a new node with the string str value.

Parameters

str String to copy in the node

Returns

The just allocated node

There are two allocation here, one for the list_node structure and one for the str argument.

```
4.8.1.2 list_string_equal() int list_string_equal ( void * left, void * right )
```

```
4.8.1.3 list_string_free_node() void list_string_free_node ( struct list_node * node )
```

Free a string node.

Parameters

node The node to free

There are two free done here, one for the list_node structure and one for the value (string) of the node.

```
4.8.1.4 list_string_read_node() char* list_string_read_node ( struct list_node * node )
```

Reads the string value in a string node.

Parameters

node Node to read from

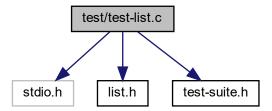
Returns

The pointer to the string in the node

The pointer returned is from the node it self, no copy is done here.

4.9 test/test-list.c File Reference

```
#include <stdio.h>
#include "list.h"
#include "test-suite.h"
Include dependency graph for test-list.c:
```



Functions

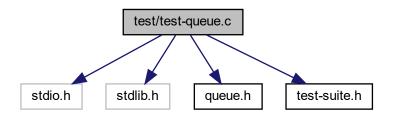
• struct test_rate test_list ()

4.9.1 Function Documentation

4.10 test/test-queue.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include "queue.h"
```

```
#include "test-suite.h"
Include dependency graph for test-queue.c:
```



Functions

• struct test_rate test_queue ()

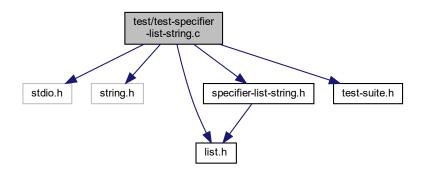
4.10.1 Function Documentation

```
4.10.1.1 test_queue() struct test_rate test_queue ( void )
```

4.11 test/test-specifier-list-string.c File Reference

```
#include <stdio.h>
#include <string.h>
#include "list.h"
#include "specifier-list-string.h"
#include "test-suite.h"
```

Include dependency graph for test-specifier-list-string.c:



Functions

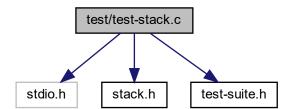
• struct test_rate test_list_string ()

4.11.1 Function Documentation

```
4.11.1.1 test_list_string() struct test_rate test_list_string ( void )
```

4.12 test/test-stack.c File Reference

```
#include <stdio.h>
#include "stack.h"
#include "test-suite.h"
Include dependency graph for test-stack.c:
```



Functions

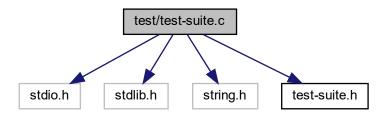
• struct test_rate test_stack ()

4.12.1 Function Documentation

```
4.12.1.1 test_stack() struct test_rate test_stack ( void )
```

4.13 test/test-suite.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include "test-suite.h"
Include dependency graph for test-suite.c:
```



Macros

- #define ANSI COLOR RED "\x1b[31m"
- #define ANSI_COLOR_GREEN "\x1b[32m"
- #define ANSI_COLOR_RESET "\x1b[0m"

Functions

- struct test_rate test ()
- void test_assert (struct test_rate *rate, const char *name, int assert)
- void test_print_rate (unsigned tests, unsigned succes)
- int main ()

4.13.1 Macro Definition Documentation

```
4.13.1.1 ANSI_COLOR_GREEN #define ANSI_COLOR_GREEN "\x1b[32m"
```

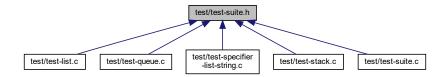
4.13.1.2 ANSI_COLOR_RED #define ANSI_COLOR_RED "\x1b[31m"

4.13.1.3 ANSI_COLOR_RESET #define ANSI_COLOR_RESET "\x1b[0m"

4.13.2 Function Documentation

4.14 test/test-suite.h File Reference

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



Data Structures

- struct test_rate
- struct test_section

Functions

- void test_assert (struct test_rate *rate, const char *name, int assert)
- void test_print_rate (unsigned tests, unsigned succes)
- struct test_rate test_queue (void)
- struct test_rate test_stack (void)
- struct test_rate test_list (void)
- struct test_rate test_list_string (void)

4.14.1 Function Documentation

```
4.14.1.1 test_assert() void test_assert (
             struct test_rate * rate,
             const char * name,
             int assert )
4.14.1.2 test_list() struct test_rate test_list (
            void )
4.14.1.3 test_list_string() struct test_rate test_list_string (
            void )
4.14.1.4 test_print_rate() void test_print_rate (
            unsigned tests,
            unsigned succes )
4.14.1.5 test_queue() struct test_rate test_queue (
            void )
4.14.1.6 test_stack() struct test_rate test_stack (
            void )
```

Index

ANSI COLOR GREEN	list.c, 23
test-suite.c, 36	list.h, 11
ANSI COLOR RED	list insert
test-suite.c, 36	list.c, 24
ANSI_COLOR_RESET	list.h, 11
test-suite.c, 36	
test-suite.c, 30	list_isEmpty list.c, 24
first	list.h, 11
list, 3	list_node, 3
1101, 0	
head	next, 4 prev, 4
queue, 5	val, 4
•	list_popleft
include/data-structures/list.h, 9	list.c, 24
include/data-structures/queue.h, 13	list.h, 12
include/data-structures/stack.h, 17	list_popright
include/specifiers/specifier-list-string.h, 19	list.c, 25
	list.h, 12
list, 2	
first, 3	list_prepend
size, 3	list.c, 25
list.c	list.h, 12
list_append, 23	list_remove
list_get, 23	list.c, 25
list_hard_append, 23	list.h, 13
list_hard_remove, 23	list_size
list_init, 23	list.c, 26
list_insert, 24	list.h, 13
list_isEmpty, 24	list_string_alloc_node
list_popleft, 24	specifier-list-string.c, 32
list_popright, 25	specifier-list-string.h, 21
list_prepend, 25	list_string_equal
list_remove, 25	specifier-list-string.c, 32
list_size, 26	specifier-list-string.h, 21
list.h	list_string_free_node
list_append, 10	specifier-list-string.c, 32
list_get, 10	specifier-list-string.h, 21
list_init, 11	list_string_read_node
list_insert, 11	specifier-list-string.c, 32
list isEmpty, 11	specifier-list-string.h, 21
list_popleft, 12	main
list_popright, 12	test-suite.c, 37
list_prepend, 12	test-suite.c, 37
list_remove, 13	name
list_size, 13	test_section, 8
list_append	next
list.c, 23	list_node, 4
list.h, 10	queue_node, 6
list_get	stack_node, 7
list.c, 23	number_success
list.h, 10	test_rate, 7
list_hard_append	number_test
list.c, 23	test_rate, 7
list_hard_remove	1001_1010, 7
list.c, 23	prev
list_init	list_node, 4
_	

40 INDEX

queue_node, 6	stack_initStack, 30 stack_isStackEmpty, 30
queue, 4	stack_pop, 30
head, 5	stack_push, 31
size, 5	stack.h
tail, 5	stack_initStack, 18
queue.c	stack_isStackEmpty, 18
queue_dequeue, 27	stack_pop, 19
queue_enqueue, 27	stack_push, 19
queue_init, 27	stack initStack
queue_isEmpty, 27	stack.c, 30
queue size, 29	stack.h, 18
queue.h	stack_isStackEmpty
queue_dequeue, 15	stack.c, 30
queue_enqueue, 15	stack.h, 18
queue_init, 15	stack_node, 6
queue_isEmpty, 15	next, 7
queue size, 17	val, 7
queue dequeue	stack_pop
queue.c, 27	stack.c, 30
queue.h, 15	stack.h, 19
queue_enqueue	stack_push
queue.c, 27	stack.c, 31
queue.h, 15	stack.h, 19
queue_init	
queue.c, 27	tail
queue.h, 15	queue, 5
queue_isEmpty	test
queue.c, 27	test-suite.c, 37
queue.h, 15	test-list.c
queue_node, 5	test_list, 33
next, 6	test-queue.c
prev, 6	test_queue, 34
val, 6	test-specifier-list-string.c
queue_size	test_list_string, 35
queue.c, 29	test-stack.c
queue.h, 17	test_stack, 35
	test-suite.c
rate	ANSI_COLOR_GREEN, 36
test_section, 8	ANSI_COLOR_RED, 36
	ANSI_COLOR_RESET, 36
Size	main, 37
list, 3	test, 37
queue, 5	test_assert, 37
specifier-list-string.c	test_print_rate, 37
list_string_alloc_node, 32 list_string_equal, 32	test-suite.h
list_string_free_node, 32	test_assert, 38
list_string_read_node, 32	test_list, 38
specifier-list-string.h	test_list_string, 38 test_print_rate, 38
list_string_alloc_node, 21	test_queue, 38
list_string_equal, 21	test_queue, 38 test_stack, 38
list_string_free_node, 21	test/test-list.c, 33
list_string_read_node, 21	test/test-queue.c, 33
src/data-structures/list.c, 22	test/test-specifier-list-string.c, 34
src/data-structures/queue.c, 26	test/test-stack.c, 35
src/data-structures/stack.c, 29	test/test-suite.c, 36
src/specifiers/specifier-list-string.c, 31	test/test-suite.h, 37
stack.c	test_assert
	_

INDEX 41

```
test-suite.c, 37
     test-suite.h, 38
test_function
     test_section, 8
test_list
     test-list.c, 33
     test-suite.h, 38
test_list_string
     test-specifier-list-string.c, 35
     test-suite.h, 38
test_print_rate
     test-suite.c, 37
     test-suite.h, 38
test_queue
     test-queue.c, 34
     test-suite.h, 38
test_rate, 7
     number_success, 7
     number_test, 7
test_section, 8
     name, 8
     rate, 8
     test_function, 8
test_stack
     test-stack.c, 35
     test-suite.h, 38
val
     list_node, 4
     queue_node, 6
     stack_node, 7
```