









NodeType

Listnode

- next: std::shared_ptr<Interface::ListNodes<NodeType>>

- data: NodeType

+ getData(): NodeType

+ setData(NodeType)

+ getNext(): std::shared_ptr<Interface::ListNodes<NodeType>>

+ setNext(): std::shared_ptr<Interface::ListNodes<NodeType>>

List

NodeType

« interface »
Queue

container

+ push (NodeType) {abstract}

+ pop(): NodeType "

+ front(): NodeType "

+ back(): NodeType "

Doubly-linked-list

NodeType

Queue

- vlist : DoublyLinkedList

+ push (NodeType)

+ pop(): NodeType

+ front(): NodeType

+ back(): NodeType

NodeType

<< interface >>
Geordnete Menge

+ insert (NodeType) {abstract}

+ remove (NodeType) "

+ isContained (NodeType): bool "

+ find (NodeType): Set<Nodeptr < NodeType >

NodeType

Geordnete Menge

insert (NodeType)

remove (NodeType)

isContained (NodeType): bool

find (NodeType): Set<Nodeptr < NodeType >

NodeType

<interface>
Stack

+ push(NodeType)
+ pop(): NodeType

list, container

NodeType

Stack

- ulist: list < NodeType >

+ push(NodeType)
+ pop(): NodeType

`<<interface>>`
Priority Queue

NodeType

Container

+ get-root(): NodeSharedPtr {abstract}
+ insert (size_t, NodeType)
+ remove(): PriorityQueueNodeSharedPtr
+ begin: Bidinator < NodeType >
+ end(): Bidinator < NodeType >

NodeType

Priority Queue

- swap-nodes (NodeSharedPtr, NodeSharedPtr)
- heapify-up (NodeSharedPtr)
- root

+ get-root(): NodeSharedPtr
+ insert (size_t, NodeType)
+ remove(): PriorityQueueNodeSharedPtr
+ begin(): Bidinator < NodeType >
+ end(): Bidinator < NodeType >

Priority-queue-node <interface>

```
+getPrio(): NodeType {abstract}  
+getData(): NodeType ""  
+get_left_child_data(): const NodeType ""  
+get_right_child_data(): const NodeType ""  
+get_parent(): std::weak_ptr ""  
+set_parent(std::weak_ptr): void ""  
+get_left_child(): std::shared_ptr ""  
+get_right_child(): std::shared_ptr ""  
+set_left_child(std::shared_ptr): void ""  
+set_right_child(std::shared_ptr): void ""  
+del_left_child(): void ""  
+del_right_child(): void ""
```

Priority Queue

NodeType

Priority-queue-node

- -parent
- -left_child
- -right_child
- -data
- -prio

```
+getPrio(): NodeType  
+getData(): NodeType  
+get_left_child_data(): const NodeType  
+get_right_child_data(): const NodeType  
+get_parent(): std::weak_ptr  
+set_parent(std::weak_ptr): void  
+get_left_child(): std::shared_ptr  
+get_right_child(): std::shared_ptr  
+set_left_child(std::shared_ptr): void  
+set_right_child(std::shared_ptr): void  
+del_left_child(): void  
+del_right_child(): void
```