

Dynamische Container C

DOKUMENTATION

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List

List

Dictionary

Dictionary

Stack

Schritt	0x01	0x02	0x03	0x04	0x05	...	Eingabe	Ausgabe
0 – Voher	Null						-	-
1 – Allocation	\0	\0	\0	\0	\0	...	-	-
2 – Push	A	\0	\0	\0	\0	...	A	-
3 – Push	A	B	\0	\0	\0	...	B	-
4 – Push	A	B	C	\0	\0	...	C	-
5 – Pull	A	B	\0	\0	\0	...	-	C
6 – Pull	A	\0	\0	\0	\0	...	-	B
7 – Pull	Null						-	A

Stack

```
char x = 0;
CollectionError collectionError;
Stack stack;
StackInitialize(&stack, sizeof(char));

//---<Add>-----
char a[] = "Hello";

StackPush(&stack, &a[0]); // Add 'H'
StackPush(&stack, &a[1]); // Add 'e'
StackPush(&stack, &a[2]); // Add 'l'
StackPush(&stack, &a[3]); // Add 'l'
StackPush(&stack, &a[4]); // Add 'o'
//-----

//---<Pull>-----
StackPull(&stack, &x); // x now contains 'o'
StackPull(&stack, &x); // x now contains 'l'
StackPull(&stack, &x); // x now contains 'l'
StackPull(&stack, &x); // x now contains 'e'
StackPull(&stack, &x); // x now contains 'H'
//-----

//---<Clear>-----
collectionError = StackPull(&stack, &x); // Will return that the List is Empty
//-----
```

Queue

Schritt	0x01	0x02	0x03	0x04	0x05	...	Eingabe	Ausgabe
0 – Voher	Null						-	-
1 – Allocation	\0	\0	\0	\0	\0	...	-	-
2 – Push	A	\0	\0	\0	\0	...	A	-
3 – Push	A	B	\0	\0	\0	...	B	-
4 – Push	A	B	C	\0	\0	...	C	-
5 – Pull	A	B	C	\0	\0	...	-	A
6 – Pull	A	B	C	\0	\0	...	-	B
7 – Pull	Null						-	C

Queue

```
char x = 0;
CollectionError collectionError;
Queue queue;
QueueInitialize(&queue, sizeof(char));

//---<Add>-----
char a[6] = "ABCDE";

collectionError = QueuePush(&queue, &a[0]); // Add 'A' with optional errorCheckValue

QueuePush(&queue, &a[1]); // Add 'B'
QueuePush(&queue, &a[2]); // Add 'C'
QueuePush(&queue, &a[3]); // Add 'D'
QueuePush(&queue, &a[4]); // Add 'E'
//-----

//--<Pull>-----

QueuePull(&queue, &x); // x will contain 'A'
QueuePull(&queue, &x); // x will contain 'B'
QueuePull(&queue, &x); // x will contain 'C'
QueuePull(&queue, &x); // x will contain 'D'
QueuePull(&queue, &x); // x will contain 'E'
//-----

//---<Clear>-----
collectionError = QueuePull(&queue, &x);
//-----
```

LinkedList

Schritt	Nr.1	Nr.2	Nr.3	Nr.4	Nr.5	...	Eingabe	Ausgabe
1	Null						-	-
	Null					...		
2 - Push	A					...	A	-
	Null					...		
3 - Push	A					...	B	-
	->	B				...		
		Null				...		
4 - Push	A					...	C	-
	->	B				...		
		->	C			...		
			Null			...		
5 - Pull(1)	A					...	-	B
	->	C				...		
		Null				...		

LinkedList

```
LinkedList linkedList;

LinkedListInitialize(&linkedList, sizeof(int));

//---<Insert>-----
int data[] = { 10,20,30,40,50,60 };

LinkedListAddToEnd(&linkedList, &data[0]);
LinkedListAddToEnd(&linkedList, &data[1]);
LinkedListAddToEnd(&linkedList, &data[2]);
LinkedListAddToEnd(&linkedList, &data[3]);
LinkedListAddToEnd(&linkedList, &data[4]);
LinkedListAddToEnd(&linkedList, &data[5]);
//-----

//---<Read>-----
int extractedData[6];

// Get elements form index
LinkedListGetElement(&linkedList, 0, &extractedData[0]);
LinkedListGetElement(&linkedList, 1, &extractedData[1]);
LinkedListGetElement(&linkedList, 2, &extractedData[2]);
LinkedListGetElement(&linkedList, 3, &extractedData[3]);
LinkedListGetElement(&linkedList, 4, &extractedData[4]);
LinkedListGetElement(&linkedList, 5, &extractedData[5]);
```

String

String

VIELEN DANK FÜR IHRE
AUFMERKSAMKEIT

Noch Fragen?