

**Linked**

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# Contents

<b>1</b>	<b>Linked</b>	<b>1</b>
1.1	Linked List . . . . .	1
1.2	addelement . . . . .	1
1.3	changecurrentelement . . . . .	2
1.4	clearlist . . . . .	2
1.5	countlist . . . . .	2
1.6	firstelement . . . . .	3
1.7	insertelement . . . . .	3
1.8	killelement . . . . .	3
1.9	lastelement . . . . .	3
1.10	listbase . . . . .	3
1.11	listindex . . . . .	4
1.12	nextelement . . . . .	4
1.13	previouselement . . . . .	4

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# Chapter 1

## Linked

### 1.1 Linked List

Pure Basic - Linked List library V1.10

The Linked Lists are object which are dynamically allocated depending of your need. This is a list of elements and each elements is fully independant of the other. You can add any elements you want, inserting elements at the position you need deleting some other and more... These kind of datamanagement is very used in the AmigaOS as it's the best way to handle data when you don't know how many there are.

Commands summary in alphabetical order:

```
AddElement
ChangeCurrentElement
ClearList
CountList
FirstElement
InsertElement
KillElement
LastElement
ListBase
ListIndex
NextElement
PreviousElement
```

Example:

```
Linked List demo
```

### 1.2 addelement

```
SYNTAX
AddElement(linkedlist())
```

**COMMAND**

Add a new empty element after the actual position. This new element become the current element of the list.

### 1.3 changecurrentelement

**SYNTAX**

```
ChangeCurrentElement(linkedlist(), *NewElement)
```

**COMMAND**

Change the current element of the specified list to the given \*NewElement. The \*NewElement must be a pointer to another element which exists in this list. This function is very useful to remember an element, and calling it back after doing other processing.

Example:

```
*Old_Element = @mylist()           ; Get the address of the actual element

ResetList(mylist())                ; Doing a search loop to all elements named
While(NextItem(mylist())           ; "John" and change them to "J"
    If mylist()\name = "John" ;
        mylist()\name = "J" ;
    EndIf                          ;
Wend                                ;

ChangeCurrentElement(mylist(), *Old_Element) ; Restore our element before the ←
search
```

### 1.4 clearlist

**SYNTAX**

```
ClearList(linkedlist())
```

**COMMAND**

Kill all the elements in this list and release their memory. After this call the list is still usable, but no more elements are in the list.

### 1.5 countlist

**SYNTAX**

```
CountList(linkedlist())
```

**COMMAND**

Count how many elements there is in the linked list. It doesn't change the actual current element.

---

## 1.6 firstelement

### SYNTAX

```
FirstElement(linkedlist())
```

### FUNCTION

Change the current list element to the first list element.

## 1.7 insertelement

### SYNTAX

```
InsertElement(linkedlist())
```

### COMMAND

Add a new empty element before the actual position. This new element become the current element of the list.

## 1.8 killelement

### SYNTAX

```
KillElement(linkedlist())
```

### FUNCTION

Remove the current element from the list. After this call, the new current element is the element which follow or null if you've kill the last element.

## 1.9 lastelement

### SYNTAX

```
LastElement(linkedlist())
```

### FUNCTION

Change the current list element to the last list element.

## 1.10 listbase

### SYNTAX

```
*ListBase = ListBase(linkedlist())
```

### FUNCTION

It returns the address of the list base structure ('List' on the AmigaOS)

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## 1.11 listindex

SYNTAX

```
Index = ListIndex(linkedlist())
```

STATEMENT

Return the current list element position, considering that the first element is at the position 1.

## 1.12 nextelement

SYNTAX

```
Result = NextElement(linkedlist())
```

STATEMENT

Change the current list element with the next element and return its address or return NULL if there is no more elements.

## 1.13 previouselement

SYNTAX

```
Result = PreviousElement(linkedlist())
```

STATEMENT

Change the current list element with the previous element and return its address or return NULL if the current element was the first element.

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