



AHELP for CIAO 3.4

## dup\_struct

Context: [varmm](#)

*Jump to:* [Description](#) [Examples](#) [Bugs](#) [See Also](#)

## Synopsis

S-Lang function to duplicate a structured variable.

## Syntax

```
Struct_Type dup_struct( Struct_Type s )
Struct_Type dup_struct( Struct_Type s, selectedfields )
```

## Description

A convenience function for duplicating a structured variable. A slice, i.e. some potentially reordered subset of fields, may optionally be created from the structure by specifying one of the following as the second parameter:

- a comma-delimited list of field names to include
- a similar list, but beginning with a single "!", for exclusion
- an integer representing the first N fields
- NULL, in which case only non-NULL fields in the input structure will be copied

## Example 1

Given this structured type definition and variable instance,

```
chips> typedef struct {first, middle, last} Name_Type;
chips> variable mozart = @Name_Type;
chips> mozart.first = "Wolfgang";
chips> mozart.middle = "Amadeus";
chips> mozart.last = "Mozart";
```

this will make an entire copy of the structure:

```
chips> variable copy = dup_struct(mozart);
```

while the following is an example of one kind of slice:

```
chips> variable slice = dup_struct(mozart, "!first");
chips> print(slice);
middle           = Amadeus
```

```
last = Mozart
```

## Example 2

Structures can contain NULL fields:

```
chips> s = @struct{ elem1, elem2, elem3 };
chips> s.elem1 = "hello"
chips> s.elem3 = "there!"
chips> print(s)
elem1      = hello
elem2      = NULL
elem3      = there!
```

If NULL is supplied as the second parameter to `dup_struct()`, then these NULL fields – `elem2` in this example – will not be copied (they are by default):

```
chips> copy = dup_struct(s, NULL)
chips> print(copy)
elem1      = hello
elem3      = there!
```

## Bugs

See the [bugs page](#) for the [Varmm library](#) on the CIAO website for an up-to-date listing of known bugs.

## See Also

*modules*

[varmm](#)

*varmm*

[apropos](#), [clearstack](#), [is\\_struct\\_defined](#), [print](#), [reverse](#)

The Chandra X-Ray Center (CXC) is operated for NASA by the Smithsonian Astrophysical Observatory.  
60 Garden Street, Cambridge, MA 02138 USA.  
Smithsonian Institution, Copyright © 1998–2006. All rights reserved.

URL:  
[http://cxc.harvard.edu/ciao3.4/dup\\_struct.html](http://cxc.harvard.edu/ciao3.4/dup_struct.html)  
Last modified: December 2006