

**NAME**

**border**, **wborder**, **box**, **hline**, **whline**, **vline**, **wvline**, **mvhline**, **mvwhline**, **mvvline**, **mvvwline** - draw borders and lines in a *curses* window of characters

**SYNOPSIS**

```
#include <curses.h>
```

```
int border(chtype ls, chtype rs, chtype ts, chtype bs,
           chtype tl, chtype tr, chtype bl, chtype br);
```

```
int wborder(WINDOW *win, chtype ls, chtype rs,
            chtype ts, chtype bs, chtype tl, chtype tr,
            chtype bl, chtype br);
```

```
int box(WINDOW *win, chtype verch, chtype horch);
```

```
int hline(chtype ch, int n);
```

```
int whline(WINDOW *win, chtype ch, int n);
```

```
int vline(chtype ch, int n);
```

```
int wvline(WINDOW *win, chtype ch, int n);
```

```
int mvhline(int y, int x, chtype ch, int n);
```

```
int mvwhline(WINDOW *win, int y, int x, chtype ch, int n);
```

```
int mvvline(int y, int x, chtype ch, int n);
```

```
int mvvwline(WINDOW *win, int y, int x, chtype ch, int n);
```

**DESCRIPTION**

The **border**, **wborder** and **box** routines draw a box around the edges of a window. Other than the window, each argument is a character with attributes:

*ls* - left side,

*rs* - right side,

*ts* - top side,

*bs* - bottom side,

*tl* - top left-hand corner,

*tr* - top right-hand corner,

*bl* - bottom left-hand corner, and

*br* - bottom right-hand corner.

If any of these arguments is zero, then the corresponding default values (defined in **curses.h**) are used instead:

**ACS\_VLINE,**  
**ACS\_VLINE,**  
**ACS\_HLINE,**  
**ACS\_HLINE,**  
**ACS\_ULCORNER,**  
**ACS\_URCORNER,**  
**ACS\_LLCORNER,**  
**ACS\_LRCORNER.**

**box**(*win, verch, horch*) is a shorthand for the following call: **wborder**(*win, verch, verch, horch, horch, 0, 0, 0, 0*).

The **hline** and **whline** functions draw a horizontal (left to right) line using *ch* starting at the current cursor position in the window. The current cursor position is not changed. The line is at most *n* characters long, or as many as fit into the window.

The **vline** and **wvline** functions draw a vertical (top to bottom) line using *ch* starting at the current cursor position in the window. The current cursor position is not changed. The line is at most *n* characters long, or as many as fit into the window.

## RETURN VALUE

All routines return the integer **OK**. The SVr4.0 manual says "or a non-negative integer if **immedok** is set", but this appears to be an error.

X/Open Curses does not specify any error conditions. This implementation returns an error if the window pointer is null.

Functions prefixed with "mv" first perform cursor movement and fail if the position (*y, x*) is outside the window boundaries.

## NOTES

The borders generated by these functions are *inside* borders (this is also true of SVr4 curses, though the fact is not documented).

Note that **border** and **box** may be macros.

## PORTABILITY

These functions are described in X/Open Curses, Issue 4.

## SEE ALSO

curs\_border(3X)

Library calls

curs\_border(3X)

**curses(3X), curs\_outopts(3X)**