

NAME

border, **wborder**, **box**, **hline**, **whline**, **vline**, **wvline**, **mvhline**, **mvwhline**, **mvvline**, **mvwvline** – 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 mvhline(int y, int x, chtype ch, int n);
int mvwhline(WINDOW *win, int y, int x, chtype ch, int n);

int vline(chtype ch, int n);
int wvline(WINDOW *win, chtype ch, int n);
int mvvline(int y, int x, chtype ch, int n);
int mvwvline(WINDOW *win, int y, int x, chtype ch, int n);
```

DESCRIPTION

wborder and **border** draw a box at the edges of the specified window or **stdscr**, respectively. Each *chtype* argument corresponds to a geometric component of the border as follows:

- 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 *chtype* argument is **0**, then *curses* uses forms-drawing characters (see **addch**(3X)) in the following correspondence:

- ACS_VLINE**,
- ACS_VLINE**,
- ACS_HLINE**,
- ACS_HLINE**,
- ACS_ULCORNER**,
- ACS_URCORNER**,
- ACS_LLCORNER**, and
- ACS_LRCORNER**.

box(*win*, *verch*, *horch*) is shorthand for “**wborder**(*win*, *verch*, *verch*, *horch*, *horch*, **0**, **0**, **0**, **0**)”.

whline draws a horizontal line of *ch* from left to right, and **wvline** a vertical one from top to bottom, stopping once *n* characters have been drawn or upon reaching the boundary of *win*. These functions do not update the cursor position (beyond any motion directed by their “mv” variants). **ncurses**(3X) describes the variants of these functions.

RETURN VALUE

These functions return **OK** on success and **ERR** on failure.

In *ncurses*,

- these functions fail if the screen is not initialized; and
- functions taking a *WINDOW* pointer argument fail if *win* is a null pointer.

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

NOTES

Unusually, there is no **wbox** function; **box** behaves as one would expect **wbox** to, accepting a *WINDOW* pointer argument.

border, **box**, **hline**, **mvhline**, **mvwhline**, **vline**, **mvvline**, and **mvwvline** may be implemented as macros.

Borders drawn by these functions are *interior* borders.

PORTABILITY

These functions are described in X/Open Curses Issue 4. It specifies no error conditions for them.

SVr4 documentation says that these functions return *OK* “or a non-negative integer if *immedok()* is set”, referring to the return value from *wrefresh*, which in SVr4 returns a count of characters written to the window if its *immedok* property is set; in *ncurses*, it does not.

BSD *curses* drew boxes with *horch* in every character cell of the top and bottom lines of the window, whereas SVr3.1 and later *curses*, because its *box* wrapped *wborder*, used the default corner characters.

HISTORY

4BSD (1980) introduced *box*, defining it as a function.

SVr3.1 (1987) added *whline* and *wvline* and their variants, as well as *border* and *wborder*, redefining *box* as a macro wrapping the latter.

SEE ALSO

curses(3X), **curs_outopts(3X)**