NAME

bswap_16, bswap_32, bswap_64 − reverse order of bytes

LIBRARY

Standard C library (*libc*, *−lc*)

SYNOPSIS

#include <byteswap.h>

uint16_t bswap_16(uint16_t *x***);**
uint32_t bswap_32(uint32_t *x***);**
uint64_t bswap_64(uint64_t *x***);**

DESCRIPTION

These functions return a value in which the order of the bytes in their 2-, 4-, or 8-byte arguments is reversed.

RETURN VALUE

These functions return the value of their argument with the bytes reversed.

ERRORS

These functions always succeed.

STANDARDS

These functions are GNU extensions.

EXAMPLES

The program below swaps the bytes of the 8-byte integer supplied as its command-line argument. The following shell session demonstrates the use of the program:

```
$ ./a.out 0x0123456789abcdef
0x123456789abcdef ==> 0xefcdab8967452301
```

Program source

```
#include <byteswap.h>
#include <inttypes.h>
#include <stdint.h>
#include <stdio.h>
#include <stdlib.h>

int
main(int argc, char *argv[])
{
    uint64_t x;

    if (argc != 2) {
        fprintf(stderr, "Usage: %s <num>\n", argv[0]);
        exit(EXIT_FAILURE);
    }

    x = strtoull(argv[1], NULL, 0);
    printf("%#" PRIx64 " ==> %#" PRIx64 "\n", x, bswap_64(x));

    exit(EXIT_SUCCESS);
}
```

SEE ALSO

byteorder(3), **endian**(3)