NAME

bswap_16, bswap_32, bswap_64 – reverse order of bytes

SYNOPSIS

#include <byteswap.h>

bswap_16(*x*);
bswap_32(*x*);
bswap_64(*x*);

DESCRIPTION

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

RETURN VALUE

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

ERRORS

These macros always succeed.

CONFORMING TO

These macros are GNU extensions.

EXAMPLE

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 <stdio.h>
#include <stdint.h>
#include <stdlib.h>
#include <inttypes.h>
#include <byteswap.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 = strtoul(argv[1], NULL, 0);
    printf("0x%" PRIx64 " ==> 0x%" PRIx64 "\n", x, bswap_64(x));

    exit(EXIT_SUCCESS);
}
```

SEE ALSO

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

COLOPHON

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