

explain_putchar(3)

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NAME

explain_putchar – explain putchar(3) errors

SYNOPSIS

```
#include <libexplain/putchar.h>

const char *explain_putchar(int c);
const char *explain_errno_putchar(int errnum, int c);
void explain_message_putchar(char *message, int message_size, int c);
void explain_message_errno_putchar(char *message, int message_size, int errnum, int c);
```

DESCRIPTION

These functions may be used to obtain explanations for errors returned by the *putchar(3)* system call.

explain_putchar

```
const char *explain_putchar(int c);
```

The **explain_putchar** function is used to obtain an explanation of an error returned by the *putchar(3)* system call. The least the message will contain is the value of `strerror(errno)`, but usually it will do much better, and indicate the underlying cause in more detail.

The *errno* global variable will be used to obtain the error value to be decoded.

This function is intended to be used in a fashion similar to the following example:

```
if (putchar(c) == EOF)
{
    fprintf(stderr, "%s\n", explain_putchar(c));
    exit(EXIT_FAILURE);
}
```

c The original *c*, exactly as passed to the *putchar(3)* system call.

Returns: The message explaining the error. This message buffer is shared by all libexplain functions which do not supply a buffer in their argument list. This will be overwritten by the next call to any libexplain function which shares this buffer, including other threads.

Note: This function is **not** thread safe, because it shares a return buffer across all threads, and many other functions in this library.

explain_errno_putchar

```
const char *explain_errno_putchar(int errnum, int c);
```

The **explain_errno_putchar** function is used to obtain an explanation of an error returned by the *putchar(3)* system call. The least the message will contain is the value of `strerror(errno)`, but usually it will do much better, and indicate the underlying cause in more detail.

This function is intended to be used in a fashion similar to the following example:

```
if (putchar(c) == EOF)
{
    int err = errno;
    fprintf(stderr, "%s\n", explain_errno_putchar(err, c));
    exit(EXIT_FAILURE);
}
```

errnum The error value to be decoded, usually obtained from the *errno* global variable just before this function is called. This is necessary if you need to call **any** code between the system call to be explained and this function, because many libc functions will alter the value of *errno*.

c The original *c*, exactly as passed to the *putchar(3)* system call.

Returns: The message explaining the error. This message buffer is shared by all libexplain functions which do not supply a buffer in their argument list. This will be overwritten by the next call to any libexplain function which shares this buffer, including other threads.

Note: This function is **not** thread safe, because it shares a return buffer across all threads, and many other functions in this library.

explain_message_putchar

```
void explain_message_putchar(char *message, int message_size, int c);
```



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The **explain_message_putchar** function may be used to obtain an explanation of an error returned by the *putchar(3)* system call. The least the message will contain is the value of `strerror(errno)`, but usually it will do much better, and indicate the underlying cause in more detail.

The *errno* global variable will be used to obtain the error value to be decoded.

This function is intended to be used in a fashion similar to the following example:

```
if (putchar(c) == EOF)
{
    char message[3000];
    explain_message_putchar(message, sizeof(message), c);
    fprintf(stderr, "%s\n", message);
    exit(EXIT_FAILURE);
}
```

message The location in which to store the returned message. If a suitable message return buffer is supplied, this function is thread safe.

message_size

The size in bytes of the location in which to store the returned message.

c

The original *c*, exactly as passed to the *putchar(3)* system call.

explain_message_errno_putchar

```
void explain_message_errno_putchar(char *message, int message_size, int errnum, int c);
```

The **explain_message_errno_putchar** function may be used to obtain an explanation of an error returned by the *putchar(3)* system call. The least the message will contain is the value of `strerror(errnum)`, but usually it will do much better, and indicate the underlying cause in more detail.

This function is intended to be used in a fashion similar to the following example:

```
if (putchar(c) == EOF)
{
    int err = errno;
    char message[3000];
    explain_message_errno_putchar(message, sizeof(message), err, c);
    fprintf(stderr, "%s\n", message);
    exit(EXIT_FAILURE);
}
```

message The location in which to store the returned message. If a suitable message return buffer is supplied, this function is thread safe.

message_size

The size in bytes of the location in which to store the returned message.

errnum

The error value to be decoded, usually obtained from the *errno* global variable just before this function is called. This is necessary if you need to call **any** code between the system call to be explained and this function, because many libc functions will alter the value of *errno*.

c

The original *c*, exactly as passed to the *putchar(3)* system call.

SEE ALSO

putchar(3)

output of characters

explain_putchar_or_die(3)

output of characters and report errors

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libexplain version 1.4

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