NAME

dwarf_add_line_entry - add a line number information entry to a producer instance

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

#include <libdwarf.h>

Dwarf_Unsigned
dwarf_add_line_entry(*Dwarf_P_Debug dbg, Dwarf_Unsigned filendx, Dwarf_Addr off, Dwarf_Unsigned lineno, Dwarf_Signed column, Dwarf_Bool is_stmt, Dwarf_Bool basic_block, Dwarf_Error *err*);

DESCRIPTION

Function **dwarf_add_line_entry**() adds a line number information entry to a DWARF producer instance.

Argument *dbg* should reference a DWARF producer instance allocated using dwarf_producer_init(3) or dwarf_producer_init_b(3).

Argument *filendx* specifies the index of the source file that contains the source line in question. Valid source file indices are those returned by the function dwarf_add_file_decl(3).

Argument *off* specifies a relocatable program address. The ELF symbol to be used for relocation is set by a prior call to the function dwarf_lne_set_address(3).

Argument *lineno* specifies the line number of the source line.

Argument *column* specifies the column number within the source line.

If the argument *is_stmt* is set to true, it indicates that the instruction at the address specified by argument *off* is a recommended breakpoint location, i.e., the first instruction in the instruction sequence generated by the source line.

If the argument *basic_block* is set to true, it indicates that the instruction at the address specified by argument *off* is the first instruction of a basic block.

If argument *err* is not NULL, it will be used to store error information in case of an error.

RETURN VALUES

On success, function **dwarf_add_line_entry**() returns DW_DLV_OK. In case of an error, function **dwarf_add_line_entry**() returns DW_DLV_NOCOUNT and sets the argument *err*.

EXAMPLES

To add line number information to the producer instance, use:

```
Dwarf_P_Debug dbg;
Dwarf_Error de;
Dwarf_Unsigned dir, filendx;

/* ... assume dbg refers to a DWARF producer instance ... */

dir = dwarf_add_directory_decl(dbg, "/home/foo", &de);
if (dir == DW_DLV_NOCOUNT)
        errx(EXIT_FAILURE, "dwarf_add_directory_decl failed: %s",
           dwarf_errmsg(-1));

filendx = dwarf_add_file_decl(dbg, "bar.c", dir, 0, 1234, &de);
if (filendx == DW_DLV_NOCOUNT)
        errx(EXIT_FAILURE, "dwarf_add_file_decl failed: %s",
           dwarf_errmsg(-1));

if (dwarf_lne_set_address(dbg, 0x4012b0, 12, &de) != DW_DLV_OK)
        errx(EXIT_FAILURE, "dwarf_lne_set_address failed: %s",
           dwarf_errmsg(-1));

if (dwarf_add_line_entry(dbg, filendx, 10, 258, 0, 1, 1, &de) !=
   DW_DLV_OK)
        errx(EXIT_FAILURE, "dwarf_add_line_entry failed: %s",
           dwarf_errmsg(-1));
```

ERRORS

Function **dwarf_add_line_entry**() can fail with:

[DW_DLE_ARGUMENT] Argument *dbg* was NULL.

[DW_DLE_ARGUMENT] The function dwarf_lne_set_address(3) was not called before calling this function.

[DW_DLE_MEMORY] An out of memory condition was encountered during the execution of the

function.

SEE ALSO

dwarf(3), dwarf_add_directory_decl(3), dwarf_add_file_decl(3), dwarf_lne_end_sequence(3), dwarf_lne_set_address(3), dwarf_producer_init(3), dwarf_producer_init_b(3)