

NAME

exref - list external references of a C source file

SYNOPSIS

exref [-aisu] [-D[name]] file

DESCRIPTION

For each routine in a C source file, exref lists all references to other routines or to global variables. For routines that reference no one, itself is given as the routine it references. Static functions are indicated by (S), and undefined functions by (UF). The type of global variable is indicated as

- (D) Initialized data
- (d) Static initialized data
- (C) Common (if the variable was previously defined, this is a redeclaration of the same variable; otherwise, the variable is defined as bss (initialized to zero))
- (c) Static common
- (U) Undefined (either an array with no dimension or an extern)
- (E) Extern that is not referenced (only listed if the u option is used)

For global variables that are not referenced, ??? is given as the calling routine.

Options are

- a Prefix each name with _
- i Include references in #include files - in this case the same information could also be obtained from nm(1)
- s Sort on second column instead of first
- u List unreferenced externs - useful with header files
- Dname Same as the D option for cc(1) to include conditionally compiled code
- D Produce separate listings for each possible combination of define names in #ifdef's, and warn about #if's (normally, #ifdef's are evaluated "as is")

The output of exref is compatible with the input required by tsort(1L), so that the calling structure of a file is obtained by

```
exref file | tsort -s | sort
```

FILES

/lib/cpp, /tmp/temp.<pid>.[01]

SEE ALSO

cc(1), nm(1), names(1L), tsort(1L)

BUGS

Not considering information in the #include files leads to some possible ambiguities: (1) in order to distinguish variables from names defined in includes, it is assumed that only such names and structure tag names are upper case, (2) references to routines that are only referenced indirectly and that are declared in an include will be missed, (3) macros defined in includes will be considered external routines.