

NAME

`cc` – C compiler

SYNOPSIS

`cc` [`-c`] [`-p`] [`-O`] [`-S`] [`-P`] file ...

DESCRIPTION

`Cc` is the UNIX C compiler. It accepts three types of arguments:

Arguments whose names end with `‘.c’` are taken to be C source programs; they are compiled, and each object program is left on the file whose name is that of the source with `‘.o’` substituted for `‘.c’`. The `‘.o’` file is normally deleted, however, if a single C program is compiled and loaded all at one go.

The following flags are interpreted by `cc`. See *ld (I)* for load-time flags.

- `-c` Suppress the loading phase of the compilation, and force an object file to be produced even if only one program is compiled.
- `-p` Arrange for the compiler to produce code which counts the number of times each routine is called; also, if loading takes place, replace the standard startup routine by one which automatically calls the *monitor* subroutine (III) at the start and arranges to write out a *mon.out* file at normal termination of execution of the object program. An execution profile can then be generated by use of *prof (I)*.
- `-O` Invoke the experimental object-code optimizer.
- `-S` Compile the named C programs, and leave the assembler-language output on corresponding files suffixed `‘.s’`.
- `-P` Run only the macro preprocessor on the named C programs, and leave the output on corresponding files suffixed `‘.i’`.

Other arguments are taken to be either loader flag arguments, or C-compatible object programs, typically produced by an earlier `cc` run, or perhaps libraries of C-compatible routines. These programs, together with the results of any compilations specified, are loaded (in the order given) to produce an executable program with name **a.out**.

FILES

file.c	input file
file.o	object file
a.out	loaded output
/tmp/ctm?	temporary
/lib/c[01]	compiler
/lib/c2	optional optimizer
/lib/crt0.o	runtime startoff
/lib/mcrt0.o	runtime startoff of monitoring
/lib/libc.a	builtin functions, etc.
/lib/liba.a	system library

SEE ALSO

“Programming in C— a tutorial,” C Reference Manual, *monitor (III)*, *prof (I)*, *cdb (I)*, *ld (I)*.

DIAGNOSTICS

The diagnostics produced by C itself are intended to be self-explanatory. Occasional messages may be produced by the assembler or loader. Of these, the most mystifying are from the assembler, in particular `‘m,’` which means a multiply-defined external symbol (function or data).

BUGS