GCC: GNU Compiler Collection, Supported: C Language, C++ Language, Objective-C and Objective-C++ Languages, Go Language

G++:The C++ compiler

# GCC Command Options

multiple single-letter options may not be grouped: ‘-dv’ is very diﬀerent from ‘-d -v’.(P9)

## Options Controlling C Dialect

### C Language Options

See Section 3.4 [Options Controlling C Dialect], page 32.

-ansi -std=standard -fgnu89-inline

-aux-info filename -fallow-parameterless-variadic-functions

-fno-asm -fno-builtin -fno-builtin-function

-fhosted -ffreestanding -fopenacc -fopenmp -fopenmp-simd

-fms-extensions -fplan9-extensions -trigraphs -traditional -traditional-cpp

### Language Independent Options

### Warning Options

### Debugging Options

### Optimization Options

### Preprocessor Options

### Assembler Option

### Linker Options

### Directory Options

### Machine Dependent Options(ARM Options,MIPS Options)

## Options Controlling the Kind of Output

file.c C source code that must be preprocessed.

file.i C source code that should not be preprocessed

file.h C, C++, Objective-C or Objective-C++ header fle

file.s Assembler code.

-x language: Specify explicitly the language for the following input fles: c c-header cpp-output;c++ c++-header c++-cpp-output

-x none :Turn oﬀ any specifcation of a language

‘-x’:If you only want some of the stages of compilation, value as:

-c :Compile or assemble the source files, but do not link, the object file name for a source file is made by replacing the suffix .c’, ‘.i’, ‘.s’, etc., with ‘.o’

-S: Stop after the stage of compilation proper; do not assemble, the assembler file name for a source file is made by replacing the suffix ‘.c’, ‘.i’, etc., with ‘.s’.

-E: Stop after the preprocessing stage; do not run the compiler proper. The output is in the form of preprocessed source code

-o: file Place output in file, out: an executable file, an object file, an assembler file or preprocessed C code

## Options Controlling C Dialect

-ansi :in C mode, this is equivalent to ‘-std=c90’; In C++ mode, it is equivalent to ‘-std=c++98’.

code keyword identifiers: \_\_asm\_\_, \_\_inline\_\_, \_\_typeof\_\_, \_\_builtin\_( such as:\_\_builtin\_abs ((n)))

## Options to Control Diagnostic Messages Formatting

-fdiagnostics-show-location=every-line: emit the same source location information (as prefix) for physical lines that result from the process of breaking a message which is too long to fit on a single line.

-fdiagnostics-color[=WHEN]: WHEN is ‘never’, ‘always’, or ‘auto’

## Options to Request or Suppress Warnings

-fsyntax-only: Check the code for syntax errors, but don’t do anything beyond that.

-fmax-errors=n: Limits the maximum number of error messages to n, at which point GCC bails

out rather than attempting to continue processing the source code.

**-w** :Inhibit all warning messages.

**-Werror**: Make all warnings into errors

**-Wno-error**:与Werror相反

**-Werror**=: Make the specified warning into an error.

**-Wno-error**=: as described the specified warning

options beginning with **‘-W’**to specifc warnings, for example‘-Wimplicit’ to request warnings on implicit declarations

**‘-Wno-’** to turn oﬀ warnings;

**-Wpedantic/-pedantic** ——reject all programs that use forbidden extensions，does not cause warning messages for use of the alternate keywords whose names begin and end with ‘\_\_’

**-pedantic-errors**——Give an error whenever the base standard

**-Wall**——This enables all the warnings about constructions that some users consider questionable

**-Wextra**——enables some extra warning ﬂags

**-Wcomment**——‘/\*’ appears in a ‘/\*’ comment

**-Wformat——**The formats are checked against the format features

**-Wnonnull**——Warn about passing a null pointer for arguments marked as requiring a non-null

value by the nonnull function attribute

**-Wparentheses**——Warn if parentheses are omitted in certain contexts

**-Wno-discarded-qualifiers**——Do not warn if type qualifiers on pointers are being discarded

**-Wno-discarded-array-qualifiers**——Do not warn if type qualifiers on arrays which are pointer targets are being discarded

## Options for Debugging Your Program or GCC