Cppcheck C/C++ static analyser

CONCEPTS

> By default only errors are shown. Add --enable=style (or all) to see warnings, style and performance findings.

Sources files or project
↓ preprocess
Configurations #ifdef variants
↓ analyse
Checks --enable ids
↓ report
Findings text / XML

RUNNING

`cppcheck <file>`
Check one file

`cppcheck <dir>`
Check all sources in a folder, recursively

`cppcheck -j <n> <dir>`
Check with n threads

`cppcheck -i <path> <dir>`
Skip a file or folder

CHECKS AND LEVELS

`cppcheck --enable=warning <dir>`
Add warnings

`cppcheck --enable=style <dir>`
Add style findings

`cppcheck --enable=performance,portability <dir>`
Add several groups (comma list)

`cppcheck --enable=all <dir>`
Enable every group

`cppcheck --check-level=exhaustive <dir>`
Deeper, slower analysis

`cppcheck --check-config <dir>`
Show missing includes and config problems

CONFIGURATION

`cppcheck -I <dir> <path>`
Add an include directory

`cppcheck -D<name> <path>`
Define a macro, check only that config

`cppcheck --std=c++20 <path>`
Set the C++ standard

`cppcheck --library=<name> <path>`
Load a library config (posix, qt, ...)

PROJECTS AND INCREMENTAL RUNS

`cppcheck --project=compile_commands.json`
Use a compilation database

`cppcheck --cppcheck-build-dir=<dir> <path>`
Cache results, enable whole-program checks

OUTPUT

`cppcheck --template=gcc <path>`
GCC-style lines for editors

`cppcheck --xml <path> 2> <out.xml>`
XML report (written to stderr)

`cppcheck --error-exitcode=<n>`
Exit with n when findings exist

SUPPRESSIONS

`cppcheck --suppress=<id> <path>`
Suppress an id everywhere

`cppcheck --suppress=<id>:<file> <path>`
Suppress an id in one file

`cppcheck --suppressions-list=<file> <path>`
Read suppressions from a text file

`cppcheck --inline-suppr <path>`
Honour cppcheck-suppress comments

`// cppcheck-suppress <id>`
Suppress on the next or same line