SQLFluff SQL linter and formatter

START HERE

`sqlfluff lint <path>`
Report violations

`sqlfluff fix <path>`
Auto-fix them

`sqlfluff format <path>`
Reformat only

`sqlfluff lint --dialect <name> <path>`
Pick the SQL flavour

`sqlfluff parse <file>`
Show the parse tree

`sqlfluff rules`
List all rules

`sqlfluff dialects`
List dialects

`cat <file> | sqlfluff lint -`
Lint stdin

Template jinja / dbt → `render` → **Lex + parse** per dialect → `rules` → **Lint** violations → `fix` → **Fixed SQL** written back

CONCEPTS

Always set a dialect (--dialect or in .sqlfluff); without one SQLFluff cannot lint most real SQL.

Config is read from .sqlfluff, tox.ini, setup.cfg or pyproject.toml in the current and parent dirs; closer files win.

format applies a stable subset of fixes (layout and capitalisation); fix applies every fixable rule.

LINT

`sqlfluff lint <path>`
Lint a file or directory

`sqlfluff lint .`
Lint the current directory

`sqlfluff lint -d <dialect> <path>`
Set the dialect

`sqlfluff lint -r <rules> <path>`
Check only these rules
Comma-separated codes or names, e.g. LT01,CP01

`sqlfluff lint -e <rules> <path>`
Skip these rules

`sqlfluff lint -f json <path>`
Machine-readable output

`sqlfluff lint --nofail <path>`
Always exit 0
Useful while rolling out to a legacy codebase

`sqlfluff lint -p <n> <path>`
Parallel processes
0 = all CPUs, -1 = all but one

`sqlfluff lint --stdin-filename <path> -`
Pick config for stdin

`sqlfluff lint --warn-unused-ignores <path>`
Flag useless noqa comments

FIX AND FORMAT

`sqlfluff fix <path>`
Fix violations in place
Rewrites files; commit or stash first

`sqlfluff format <path>`
Autoformat in place

`sqlfluff fix -r <rules> <path>`
Fix only these rules

`sqlfluff fix --check <path>`
Preview, then confirm

`sqlfluff fix -x _fixed <path>`
Write to a suffixed copy

`sqlfluff fix --FIX-EVEN-UNPARSABLE <path>`
Fix files with template errors
Risky: can produce broken SQL

`cat <file> | sqlfluff fix -`
Fix stdin to stdout

INSPECT

`sqlfluff parse <file>`
Print the parse tree

`sqlfluff parse -c <file>`
Code elements only

`sqlfluff render <file>`
Show templated SQL

`sqlfluff rules`
List all rules

`sqlfluff dialects`
List all dialects

OPTIONS

`--templater / -t <name>`
raw, jinja, python, placeholder

`--config <file>`
Add an extra config file

`--ignore-local-config`
Skip discovered config files

`--disable-noqa`
Ignore all noqa comments

CONFIG

`[sqlfluff]`
Core settings section

`dialect = <name>`
Default dialect

CONFIG (cont.)

`templater = jinja`
Choose the templater

`exclude_rules = <list>`
Rules to skip

`rules = <list>`
Rules to run only

`max_line_length = <n>`
Line length limit (LT05)

`[sqlfluff:rules:<rule>]`
Per-rule settings

`[sqlfluff:indentation]`
Indent settings

`[tool.sqlfluff]`
Section in pyproject.toml

`capitalisation_policy = <p>`
consistent, upper or lower

`.sqlfluffignore`
Paths to skip

IGNORING CODE

`-- noqa`
Ignore all rules on this line

`-- noqa: <rules>`
Ignore listed rules on this line

`-- noqa: disable=<rules>`
Ignore from here on

`-- noqa: enable=<rules>`
Resume checking

`-- noqa: disable=all`
Ignore everything from here

COMMON RULES

`LT01`
Spacing

`LT02`
Indentation

`LT05`
Line too long

`LT12`
Single trailing newline

`LT09`
Select targets on own lines

`CP01`
Keyword capitalisation

`CP02`
Identifier capitalisation

COMMON RULES (cont.)

`AL01`
Table alias with AS

`AL05`
Unused table alias

`RF01`
Unresolvable references

`RF02`
Qualify multi-table columns

`ST03`
Unused CTE

`ST05`
Subquery instead of CTE

INTEGRATION

`id: sqlfluff-lint`
pre-commit hook: lint
Hook repo: https://github.com/sqlfluff/sqlfluff

`id: sqlfluff-fix`
pre-commit hook: fix

`pip install sqlfluff`
Install

`pip install sqlfluff-templater-dbt`
dbt templater plugin

RECIPES

Minimal .sqlfluff

```
[sqlfluff]
dialect = postgres
exclude_rules = LT05, ST07
max_line_length = 100

[sqlfluff:indentation]
tab_space_size = 4
```

CI lint of changed files

```
git diff --name-only origin/
main -- '*.sql' \
  | xargs sqlfluff lint -f
github-annotation \
  --annotation-level warning
```

pre-commit config

```
repos:
  - repo: https://github.com/
sqlfluff/sqlfluff
    rev: <version>
    hooks:
      - id: sqlfluff-lint
      - id: sqlfluff-fix
```

Adopt gradually

```
sqlfluff lint models/ --nofail
-f json > baseline.json
sqlfluff fix models/ -r
LT01,LT02,CP01
sqlfluff lint models/
```