PDM Modern Python package manager

CONCEPTS

Commit pyproject.toml and pdm.lock; pdm install reproduces the same set anywhere.

pyproject.toml what you want
↓ `pdm lock`
pdm.lock exact pins + hashes
↓ `pdm sync`
Virtualenv installed packages
↓ `pdm run`
Your command runs in the env

PDM keeps dependencies in standard pyproject.toml (PEP 621) fields, not a private format.

PROJECT SETUP

`pdm init`
Create pyproject.toml interactively

`pdm init --python <ver>`
Init with a Python version or path

`pdm init --lib`
Init a distributable package

`pdm new <path>`
Create a new project folder

`pdm import <file>`
Import from Pipfile, Poetry or requirements

`pdm use <python>`
Select the project interpreter

`pdm info`
Show project and environment info

ADD AND REMOVE

`pdm add <pkg>`
Add a dependency and install it

`pdm add <pkg>==<ver>`
Add with a version pin

`pdm add -d <pkg>`
Add a development dependency

`pdm add -G <group> <pkg>`
Add to a named group

`pdm add -e <path>`
Add a local package in editable mode

`pdm add --no-sync <pkg>`
Edit pyproject.toml, skip installing

ADD AND REMOVE (cont.)

`pdm remove <pkg>`
Remove a dependency

`pdm remove -d <pkg>`
Remove a dev dependency

LOCK AND INSTALL

`pdm install`
Install from the lock, locking if stale

`pdm lock`
Resolve and write pdm.lock

`pdm sync`
Install exactly what the lock says

`pdm install --frozen-lockfile`
Install without touching the lock

`pdm install --check`
Fail if the lock is out of date

`pdm install --prod`
Skip dev dependencies

`pdm install -G <group>`
Include an extra group

`pdm install -G :all`
Include every group

`pdm lock --check`
Check the lock is current and quit

`pdm sync --clean`
Remove packages not in the lock

UPDATE

`pdm update`
Update all packages and re-lock

`pdm update <pkg>`
Update one package

`pdm outdated`
List packages with newer versions

`pdm update --dry-run`
Preview an update

RUN

`pdm run <cmd>`
Run a command in the env

`pdm run python <file>`
Run a script with the env's Python

`pdm run <script> [args]`
Run a [tool.pdm.scripts] entry

INSPECT

`pdm list`
List installed packages

`pdm list --tree`
Show the dependency tree

`pdm list --tree -r`
Reverse tree: who needs this?

VIRTUALENVS AND PYTHON

`pdm venv create`
Create a virtualenv for the project

`pdm venv activate`
Print the activate command

BUILD AND PUBLISH

`pdm build`
Build sdist and wheel into dist/

`pdm publish`
Build and upload to PyPI

`pdm export -o requirements.txt`
Export the lock as requirements

CONFIGURATION

`pdm config <key> <value>`
Set a user-level setting

PYPROJECT.TOML

Project and groups

```
[project]
name = "app"
requires-python = "⩾3.10"
dependencies = ["requests⩾2.31"]

[project.optional-dependencies]
web = ["flask"]

[dependency-groups]
dev = ["pytest"]

[tool.pdm]
distribution = false
```

Script shortcuts

```
[tool.pdm.scripts]
start = "flask run -p 54321"
test = {cmd = "pytest -q", help =
"Run tests"}
lint = {shell = "ruff check . |
head"}
main = {call = "app.cli:main"}
all = {composite = ["lint",
"test"]}
test.env = {APP_ENV = "test"}
```