uv: Python Package Management

"Everything should be made as simple as possible, but not simpler."

– Albert Einstein

What is uv ?

[uv](uv) is an **extremely fast Python package installer and resolver**, **written in Rust**, and designed as a drop-in replacement for `pip` and pip-tools workflows.

- **Speed and Efficiency**: uv is extremely fast.

- **Disk Space Efficiency**: uv uses a global cache to minimize redundancy, ensuring that identical packages are stored only once, regardless of how many projects require them.

- **Cross-Platform Compatibility**: Windows, macOS, Linux.

- **Virtual Environment Capabilities** `uv venv`,
`uv venv myenv --python 3.12`.

Installation

- macOS, Linux

```
curl -LsSf https://astral.sh/uv/install.sh | sh
```

or

```
wget -qO- https://astral.sh/uv/install.sh | sh
```

- Windows

```
powershell -ExecutionPolicy ByPass -c "irm https://astral.sh/uv/install.ps1 | iex"
```

Creating project

- `uv init`

- `uv init --app`

- `uv init --lib`

- `uv init --app --python 3.12`

Adding dependencies

```
uv add
```
```
uv add --dev
```
```
uv add --optional
```
```
uv remove
```

Syncing already existing projects

`uv sync`