

Mac Python Project Environment Setup Guide

1. Install Xcode Command Line Tools

Open Terminal and run:

```
xcode-select --install
```

2. Install pyenv

Run:

```
curl https://pyenv.run | bash
```

Add the following to your ~/.bash_profile:

```
export PATH="$HOME/.pyenv/bin:$PATH:/usr/local/bin"
```

```
eval "$(pyenv init --path)"
```

```
eval "$(pyenv virtualenv-init -)"
```

Reload your shell:

```
source ~/.bash_profile
```

3. Install Python 3.12.3

```
pyenv install 3.12.3
```

4. Create a Parent Project Directory

```
mkdir -p ~/python
```

```
cd ~/python
```

5. Set the Python Version for All Subfolders

```
pyenv local 3.12.3
```

6. Create Your New Project Folder

```
mkdir my-first-project
```

```
cd my-first-project
```

7. Install Poetry (using pip)

```
pip install poetry
```

8. Initialize Poetry in the Project

```
poetry init
```

(Follow the prompts; skip dependencies for a minimal config.)

9. Configure pyproject.toml

Replace contents of pyproject.toml with:

```
[tool.poetry]
```

```
name = "my-first-project"
```

```
version = "0.1.0"
```

```
description = "A Stark-certified Python Poetry project"
```

```
authors = ["Tony Stark"]
```

```
[tool.poetry.dependencies]
```

```
python = "3.12.3"
```

```
[tool.poetry.group.dev.dependencies]
```

```
pytest = "*"
```

```
[build-system]
```

```
requires = ["poetry-core>=1.0.0"]
```

```
build-backend = "poetry.core.masonry.api"
```

10. Install Dependencies Without Installing the Root Project

```
poetry install --no-root
```

11. Activate the Poetry Virtual Environment

```
poetry shell
```

12. Test the Setup

Create a file named main.py with:

```
print("Environment setup is successful!")
```

Then run:

```
python main.py
```

You should see:

```
Environment setup is successful!
```